

INTERNAL REVENUE BULLETIN



HIGHLIGHTS OF THIS ISSUE

These synopses are intended only as aids to the reader in identifying the subject matter covered. They may not be relied upon as authoritative interpretations.

Bulletin No. 2025-41
October 6, 2025

ADMINISTRATIVE, INCOME TAX

Notice 2025-54, page 479.

Optional special *per diem* rates. This notice provides the 2025-2026 special *per diem* rates for taxpayers to use in substantiating the amount of ordinary and necessary business expenses incurred while traveling away from home. The notice includes (1) the special transportation industry rate, (2) the rate for the incidental expenses only deduction, and (3) the rates and list of high-cost localities for the high-low substantiation method.

EXCISE TAX

Notice 2025-51, page 448.

This Notice of Determinations adds 39 chemical substances to the list of taxable substances under § 4672 subject to the tax imposed by § 4671.

INCOME TAX

Notice 2025-52, page 474.

This notice explains the circumstances under which the four-year replacement period under section 1033(e)(2) is extended for livestock sold on account of drought. The Appendix to this notice contains a list of counties that experienced exceptional, extreme, or severe drought conditions during the 12-month period ending August 31, 2025. Taxpayers may use this list to determine if any extension is available.

Rev. Rul. 2025-19, page 445.

Federal rates; adjusted federal rates; adjusted federal long-term rate, and the long-term tax exempt rate. For purposes of sections 382, 1274, 1288, 7872 and other sections of the Code, tables set forth the rates for October 2025.

Rev. Rul. 2025-20, page 447.

Fringe benefits aircraft valuation formula. For purposes of section 1.61-21(g) of the Income Tax Regulations, relating to the rule for valuing non-commercial flights on employer-provided aircraft, the Standard Industry Fare Level (SIFL) cents-per-mile rates and terminal charge in effect for the second half of 2025 are set forth.

The IRS Mission

Provide America's taxpayers top-quality service by helping them understand and meet their tax responsibilities and enforce the law with integrity and fairness to all.

Introduction

The Internal Revenue Bulletin is the authoritative instrument of the Commissioner of Internal Revenue for announcing official rulings and procedures of the Internal Revenue Service and for publishing Treasury Decisions, Executive Orders, Tax Conventions, legislation, court decisions, and other items of general interest. It is published weekly.

It is the policy of the Service to publish in the Bulletin all substantive rulings necessary to promote a uniform application of the tax laws, including all rulings that supersede, revoke, modify, or amend any of those previously published in the Bulletin. All published rulings apply retroactively unless otherwise indicated. Procedures relating solely to matters of internal management are not published; however, statements of internal practices and procedures that affect the rights and duties of taxpayers are published.

Revenue rulings represent the conclusions of the Service on the application of the law to the pivotal facts stated in the revenue ruling. In those based on positions taken in rulings to taxpayers or technical advice to Service field offices, identifying details and information of a confidential nature are deleted to prevent unwarranted invasions of privacy and to comply with statutory requirements.

Rulings and procedures reported in the Bulletin do not have the force and effect of Treasury Department Regulations, but they may be used as precedents. Unpublished rulings will not be relied on, used, or cited as precedents by Service personnel in the disposition of other cases. In applying published rulings and procedures, the effect of subsequent legislation, regulations, court decisions, rulings, and procedures must be considered, and Service personnel and others concerned are cautioned

against reaching the same conclusions in other cases unless the facts and circumstances are substantially the same.

The Bulletin is divided into four parts as follows:

Part I.—1986 Code.

This part includes rulings and decisions based on provisions of the Internal Revenue Code of 1986.

Part II.—Treaties and Tax Legislation.

This part is divided into two subparts as follows: Subpart A, Tax Conventions and Other Related Items, and Subpart B, Legislation and Related Committee Reports.

Part III.—Administrative, Procedural, and Miscellaneous.

To the extent practicable, pertinent cross references to these subjects are contained in the other Parts and Subparts. Also included in this part are Bank Secrecy Act Administrative Rulings. Bank Secrecy Act Administrative Rulings are issued by the Department of the Treasury's Office of the Assistant Secretary (Enforcement).

Part IV.—Items of General Interest.

This part includes notices of proposed rulemakings, disbarment and suspension lists, and announcements.

The last Bulletin for each month includes a cumulative index for the matters published during the preceding months. These monthly indexes are cumulated on a semiannual basis, and are published in the last Bulletin of each semiannual period.

The contents of this publication are not copyrighted and may be reprinted freely. A citation of the Internal Revenue Bulletin as the source would be appropriate.

Part I

Section 1274.— Determination of Issue Price in the Case of Certain Debt Instruments Issued for Property

(Also Sections 42, 280G, 382, 467, 468, 482, 483, 1288, 7520, 7872.)

Rev. Rul. 2025-19

This revenue ruling provides various prescribed rates for federal income

tax purposes for October 2025 (the current month). Table 1 contains the short-term, mid-term, and long-term applicable federal rates (AFR) for the current month for purposes of section 1274(d) of the Internal Revenue Code. Table 2 contains the short-term, mid-term, and long-term adjusted applicable federal rates (adjusted AFR) for the current month for purposes of section 1288(b). Table 3 sets forth the adjusted federal long-term rate and the long-term tax-exempt rate described in section 382(f). Table 4 contains the appro-

priate percentages for determining the low-income housing credit described in section 42(b)(1) for buildings placed in service during the current month. However, under section 42(b)(2), the applicable percentage for non-federally subsidized new buildings placed in service after July 30, 2008, shall not be less than 9%. Finally, Table 5 contains the federal rate for determining the present value of an annuity, an interest for life or for a term of years, or a remainder or a reversionary interest for purposes of section 7520.

REV. RUL. 2025-19 TABLE 1
Applicable Federal Rates (AFR) for October 2025
Period for Compounding

	<i>Annual</i>	<i>Semiannual</i>	<i>Quarterly</i>	<i>Monthly</i>
		<i>Short-term</i>		
AFR	3.81%	3.77%	3.75%	3.74%
110% AFR	4.19%	4.15%	4.13%	4.11%
120% AFR	4.57%	4.52%	4.49%	4.48%
130% AFR	4.96%	4.90%	4.87%	4.85%
		<i>Mid-term</i>		
AFR	3.87%	3.83%	3.81%	3.80%
110% AFR	4.25%	4.21%	4.19%	4.17%
120% AFR	4.65%	4.60%	4.57%	4.56%
130% AFR	5.04%	4.98%	4.95%	4.93%
150% AFR	5.83%	5.75%	5.71%	5.68%
175% AFR	6.81%	6.70%	6.64%	6.61%
		<i>Long-term</i>		
AFR	4.73%	4.68%	4.65%	4.64%
110% AFR	5.22%	5.15%	5.12%	5.10%
120% AFR	5.70%	5.62%	5.58%	5.56%
130% AFR	6.17%	6.08%	6.03%	6.00%

REV. RUL. 2025-19 TABLE 2
Adjusted AFR for October 2025
Period for Compounding

	<i>Annual</i>	<i>Semiannual</i>	<i>Quarterly</i>	<i>Monthly</i>
Short-term adjusted AFR	2.88%	2.86%	2.85%	2.84%
Mid-term adjusted AFR	2.93%	2.91%	2.90%	2.89%
Long-term adjusted AFR	3.58%	3.55%	3.53%	3.52%

REV. RUL. 2025-19 TABLE 3
Rates Under Section 382 for October 2025

Adjusted federal long-term rate for the current month	3.58%
Long-term tax-exempt rate for ownership changes during the current month (the highest of the adjusted federal long-term rates for the current month and the prior two months.)	3.65%

REV. RUL. 2025-19 TABLE 4

Appropriate Percentages Under Section 42(b)(1) for October 2025

Note: Under section 42(b)(2), the applicable percentage for non-federally subsidized new buildings placed in service after July 30, 2008, shall not be less than 9%.

Appropriate percentage for the 70% present value low-income housing credit	8.00%
Appropriate percentage for the 30% present value low-income housing credit	3.43%

REV. RUL. 2025-19 TABLE 5

Rate Under Section 7520 for October 2025

Applicable federal rate for determining the present value of an annuity, an interest for life or a term of years, or a remainder or reversionary interest	4.6%
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Section 42.—Low-Income Housing Credit

The applicable federal short-term, mid-term, and long-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 467.—Certain Payments for the Use of Property or Services

The applicable federal short-term, mid-term, and long-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 483.—Interest on Certain Deferred Payments

The applicable federal short-term, mid-term, and long-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 280G.—Golden Parachute Payments

The applicable federal short-term, mid-term, and long-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19 page 445.

Section 468.—Special Rules for Mining and Solid Waste Reclamation and Closing Costs

The applicable federal short-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 1288.—Treatment of Original Issue Discount on Tax-Exempt Obligations

The adjusted applicable federal short-term, mid-term, and long-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 382.—Limitation on Net Operating Loss Carryforwards and Certain Built-In Losses Following Ownership Change

The adjusted applicable federal long-term rate is set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 482.—Allocation of Income and Deductions Among Taxpayers

The applicable federal short-term, mid-term, and long-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 7520.—Valuation Tables

The applicable federal mid-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 7872.—Treatment of Loans With Below-Market Interest Rates

The applicable federal short-term, mid-term, and long-term rates are set forth for the month of October 2025. See Rev. Rul. 2025-19, page 445.

Section 61. Gross Income Defined

26 CFR 1.61-21: Taxation of Fringe Benefits

Rev. Rul. 2025-20

For purposes of the taxation of fringe benefits under section 61 of the Internal

Revenue Code, section 1.61-21(g) of the Income Tax Regulations provides a rule for valuing noncommercial flights on employer-provided aircraft. Section 1.61-21(g)(5) provides an aircraft valuation formula to determine the value of such flights. The value of a flight is determined under the base aircraft valuation formula (also known as the Standard Industry Fare Level formula or SIFL) by multiplying the SIFL cents-per-mile

rates applicable for the period during which the flight was taken by the appropriate aircraft multiple provided in section 1.61-21(g)(7) and then adding the applicable terminal charge. The SIFL cents-per-mile rates in the formula and the terminal charge are calculated by the Department of Transportation (DOT) and are reviewed semi-annually.

The following chart sets forth the terminal charge and SIFL mileage rates:

<i>Period During Which the Flight Is Taken</i>	<i>Terminal Charge</i>	<i>SIFL Mileage Rates</i>
7/1/25 - 12/31/25	\$53.62	Up to 500 miles = \$.2933 per mile 501-1500 miles = \$.2237 per mile Over 1500 miles = \$.2150 per mile

DRAFTING INFORMATION

The principal author of this revenue ruling is Kathleen Edmondson of the Office

of Associate Chief Counsel (Employee Benefits, Exempt Organizations and Employment Taxes). For further information regarding this revenue ruling, contact

Ms. Edmondson at (202) 317-6798 (not a toll-free number).

Part III

Superfund Tax on Chemical Substances; Notice of Determinations to Add Substances to List of Taxable Substances

Notice 2025-51

SUMMARY: This notice of determinations modifies the list of taxable substances to include the following 39 substances: acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$, bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$, chloroprene rubber, ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o; m=56.82, n=40.46, o=2.71)$, ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=78.95, m=21.05)$, ethylene vinyl acetate (VA ≥ 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$, hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$, isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m; n=99.10, m=0.90)$, poly(ethylene-propylene) rubber $((C_2H_4)_n-(C_3H_6)_m; m=59.04, n=40.96)$, emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=15.83, n=2.53)$, solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16, n=32.85)$, emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$, solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$, hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_x-(C_3H_3N)_y-(C_{15}H_{24}O)_a; x=2,783.05, y=1,907.27, a=5.74)$, bromobutyl isobutylene isoprene rubber $((C_4H_8)_x(C_5H_8)_y(Br_2)_z; x=7071, y=59, z=50)$, chlorobutyl isobutylene isoprene rubber $((C_4H_8)_x(C_5H_8)_y(Cl_2)_z; x=7036, y=88, z=70)$, DIPE—di-isopropyl ether, di-isodecyl phthalate, di-isononyl adipate, di-isononyl phthalate, di-tridecyl phthalate, ethylene propylene diene (EPDM) rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$, isodecyl alcohol, isodecyl benzoate, isooctyl alcohol, linear nonyl phthalate, linear nonyl undecyl phthalate, linear undecyl phthalate, linear nonyl tri-mellitate, neo decanoic acid, neo pentanoic acid, nonene, regular butyl rubber $((C_4H_8)_x(C_5H_8)_y; x=7036, y=88)$, tridecyl alcohol, tri-isononyl tri-mellitate, di-isobutylene, poly-isobutylene, styrene-acrylonitrile $((C_3H_3N)_a-(C_8H_8)_s; a=0.26, s=0.74)$, and acrylonitrile butadiene styrene $((C_3H_3N)_a-(C_4H_6)_b-(C_8H_8)_s; a=0.16, b=0.10, s=0.74)$,

EFFECTIVE DATES: The effective date for purposes of the tax under section 4671 of the Internal Revenue Code (Code) for the taxable substances added to the list is January 1, 2026. For the effective date for purposes of refund claims under section 4662(e) of the Code for the taxable substances added to the list, see the determination for each substance.

FOR FURTHER INFORMATION CONTACT: Andrew Clark or Jacob Peebles at (202) 317-6855 (not a toll-free number).

SUPPLEMENTARY INFORMATION:

Background

Section 4671(a) of the Code imposes an excise tax on the sale or use of a taxable substance by the importer thereof (section 4671 tax). Section 4672(a)(1) of the Code defines the term *taxable substance* as any substance which, at the time of sale or use by the importer, is listed as a taxable substance by the Secretary of the Treasury or the Secretary's delegate (Secretary) on the list of taxable substances under section 4672(a) (List).

Under section 4672(a)(2), an importer or exporter of any substance may request that the Secretary determine whether such substance should be added to the List as a taxable substance or should be removed from the List. Under section 4672(a)(2) (B) and (a)(4) and (b)(2), the Secretary is required to add a substance to the List if the Secretary determines that any taxable chemicals that are listed in section 4661(b) of the Code constitute more than 20 percent of the weight, or more than 20 percent of the value, of the materials used to produce such substance, which determination is required under section 4672(a)(2)(B) and (a)(4) to be made based on the predominant method of production

(weight or value test). Section 4672(a)(4) authorizes the Secretary to remove a substance from the List only if such substance meets neither the weight nor the value test of section 4672(a)(2)(B).

Section 4672(a)(3) includes an initial list of taxable substances. Section 4 of Notice 2021-66 (2021-52 I.R.B. 901) provides the list of 101 substances that the Secretary added to the List before November 15, 2021. On May 31, 2024, the Secretary published a Notice of Determination in the *Federal Register* (89 FR 47238) adding polyoxymethylene to the List; this Notice of Determination was also published in the Internal Revenue Bulletin as Notice 2024-50 (2024-26 I.R.B. 1789). On August 4, 2025, the Secretary published a Notice of Determinations in the *Federal Register* (90 FR 36520) adding 21 substances to the List; this Notice of Determinations was also published in the Internal Revenue Bulletin as Notice 2025-41 (2025-34 I.R.B. 325). Rev. Proc. 2022-26 (2022-29 I.R.B. 90), *as modified* by Rev. Proc. 2023-20 (2023-15 I.R.B. 636), provides the exclusive procedures by which an importer, exporter, or interested person may request a determination that a particular substance be added to or removed from the List.

Section 4671(b)(3) authorizes the Secretary to prescribe a tax rate for taxable substances in lieu of the tax rate specified in section 4671(b)(2). The tax rate prescribed by the Secretary for a substance added to the List is calculated by multiplying the conversion factor for each taxable chemical used in the production of the substance by the corresponding tax rate for that taxable chemical under section 4661(b), and adding those results together. Conversion factors are determined based on the predominant method of production of the substance. *See* sections 8 and 10.04(8) of Rev. Proc. 2022-26. Importers are not required to use the prescribed tax rate for a taxable substance and may calculate their own rate under section 4671(b)(1).

Pursuant to Section 4672(a)(4), this notice of determinations modifies the List to include the 39 additional taxable substances listed in the Summary of Determinations section of this notice, as explained

in the Requests to Add Substances to the List and General Explanation of Determinations sections of this notice. The determination for each specific substance added to the List is explained in parts 1 through 39 of the Modifications to the List of Taxable Substances section of this notice.

The updated List and prescribed tax rates for taxable substances will be included in the instructions to Form 6627, *Environmental Taxes*.

Summary of Determinations

On September 15, 2025, the Secretary determined to add the following substances to the List:

1. Acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$
2. Bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$
3. Chloroprene rubber
4. Ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o; m=56.82, n=40.46, o=2.71)$
5. Ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=78.95, m=21.05)$
6. Ethylene vinyl acetate (VA ≥ 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$
7. Hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$
8. Isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m; n=99.10, m=0.90)$
9. Poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n; m=59.04, n=40.96)$
10. Emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=15.83, n=2.53)$
11. Solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16, n=32.85)$
12. Emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$
13. Solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$
14. Hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_x-(C_3H_3N)_y-(C_{15}H_{24}O)_a; x=2,783.05, y=1,907.27, a=5.74)$
15. Bromobutyl isobutylene isoprene rubber $((C_4H_8)_x(C_5H_8)_y(Br_2)_z; x=7071, y=59, z=50)$
16. Chlorobutyl isobutylene isoprene rubber $((C_4H_8)_x(C_5H_8)_y(Cl_2)_z; x=7036, y=88, z=70)$
17. DIPE-di-isopropyl ether

18. Di-isodecyl phthalate
19. Di-isononyl adipate
20. Di-isononyl phthalate
21. Di-tridecyl phthalate
22. Ethylene propylene diene (EPDM) rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$
23. Isodecyl alcohol
24. Isodecyl benzoate
25. Isooctyl alcohol
26. Linear nonyl phthalate
27. Linear nonyl undecyl phthalate
28. Linear undecyl phthalate
29. Linear nonyl tri-mellitate
30. Neo decanoic acid
31. Neo pentanoic acid
32. Nonene
33. Regular butyl rubber $((C_4H_8)_x(C_5H_8)_y; x=7036, y=88)$
34. Tridecyl alcohol
35. Tri-isononyl tri-mellitate
36. Di-isobutylene
37. Polyisobutylene
38. Styrene-acrylonitrile $((C_3H_3N)_a-(C_8H_8)_s; a=0.26, s=0.74)$
39. Acrylonitrile butadiene styrene $((C_3H_3N)_a-(C_4H_6)_b-(C_8H_8)_s; a=0.16, b=0.10, s=0.74)$

Requests to Add Substances to the List

For each of the substances listed in the Summary of Determinations section of this notice, an importer or an exporter submitted a petition to the IRS in accordance with Rev. Proc. 2022-26 requesting a determination under section 4672(a)(2) to add the substance to the List. For each substance, the petition represented that taxable chemicals constitute more than 20 percent of the weight of materials used to produce the substance, based on the predominant method of production.

General Explanation of Determinations

After reviewing the petitions for each of the substances listed in the Summary of Determinations section of this notice, the Secretary determined that taxable chemicals constitute more than 20 percent by weight of the materials used to produce the substance, based on the predominant method of production. Therefore, each of the substances is added to the List as required under section 4672(a)(2) and (4). The Secretary made the determinations to

add these substances to the List in accordance with the requirements of section 4672(a)(2) and (4), and pursuant to the procedures set forth in Rev. Proc. 2022-26, *as modified by* Rev. Proc. 2023-20.

The relevant information for each taxable substance is provided in the specific determinations included in parts 1 through 39 of the Modifications to the List of Taxable Substances section of this notice. The tax rate for each taxable substance, as prescribed by the Secretary, is provided in paragraph (a)(6) of each specific determination. All scientific information provided in the specific determinations reflects the information provided by petitioners as published in each taxable substance's respective Notice of Filing.

Classification numbers proposed by each petitioner are included in paragraph (b) of each part, after each specific determination. The classification numbers provided with respect to a taxable substance are not part of the determination of whether it is added to the List and do not impact whether such substance is a taxable substance. Taxpayers may not rely on classification numbers for any purpose under sections 4661, 4662, 4671, and 4672, including (but not limited to) identification of a substance as a taxable substance on the List. Classification numbers may change over time. The Department of the Treasury (Treasury Department) and the IRS do not anticipate updating this document to reflect any such changes.

For purposes of the section 4671 tax, all the modifications in parts 1 through 39 of the Modifications to the List of Taxable Substances section of this notice are effective on and after January 1, 2026. For purposes of refund claims under section 4662(e), see the effective date for each specific determination in paragraph (a)(5)(ii) of each of parts 1 through 39 of the Modifications to the List of Taxable Substances section of this notice.

Modifications to the List of Taxable Substances

1. Determination to Add Acrylonitrile-butadiene Rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$ to the List

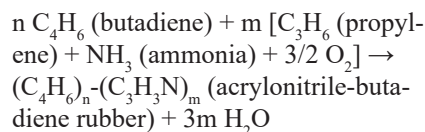
Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of acrylo-

nitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$ to the List. According to the petition, the taxable chemicals butadiene, propylene, and ammonia constitute 64.59 percent by weight of the materials used to produce acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$, based on the predominant method of production.

(a) *Determination.* Acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing acrylonitrile-butadiene rubber is through a radical polymerization of acrylonitrile and butadiene in an emulsion process. Acrylonitrile monomer is produced by the SOHIO process (i.e., catalytic ammoxidation of propylene).

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14684) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals butadiene, propylene, and ammonia constitute more than 20 percent by weight of the materials used in the production of acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$ to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$9.58 per ton. The conversion factors for the taxable chemicals used in the production of acrylonitrile-butadiene rubber $((C_4H_6)_n-(C_3H_3N)_m; n=13.44, m=25.54)$ are 0.35 for butadiene, 0.52 for propylene, and 0.21 for ammonia. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical by the tax rate for that taxable chemical: $((0.35 \times \$9.74) + (0.52 \times \$9.74) + (0.21 \times \$5.28) = \$9.58)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.59.0000

(ii) *Schedule B number:* 4002.59.0000

(iii) *CAS number:* 9003-18-3

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

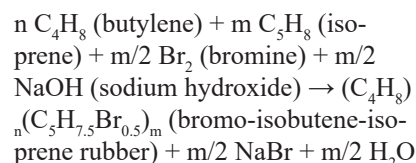
2. Determination to Add Bromo-isobutene-isoprene Rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$ to the List

Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$ to the List. According to the petition, the taxable chemicals butylene, bromine, and sodium hydroxide constitute 97.89 percent by weight of the materials used to produce bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$, based on the predominant method of production.

(a) *Determination.* Bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing bromo-isobutene-isoprene rubber involves reacting a hexane solution of butyl rubber with elemental bromine. Butyl rubber is produced via the cationic copolymerization of butylene with isoprene in the presence of a Friedel-Crafts catalyst at low temperature, around -100°C.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14694) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals butylene, bromine, and sodium hydroxide constitute more than 20 percent by weight of the materials used in the production of bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$ to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* April 1, 2023

(6) *Tax rate prescribed by the Secretary:* \$9.72 per ton. The conversion factors for the taxable chemicals used in the production of bromo-isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_7.5Br_{0.5})_m; n=98.20, m=1.80)$ are 0.97 for butylene, 0.03 for bromine, and 0.01 for sodium hydroxide. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical by the tax rate for that taxable chemical: $((0.97 \times \$9.74) + (0.03 \times \$8.90) + (0.01 \times \$0.56) = \$9.72)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.39.0000

(ii) *Schedule B number:* 4002.39.0000

(iii) *CAS number:* 68441-14-5

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

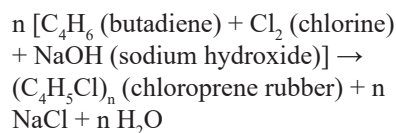
3. Determination to Add Chloroprene Rubber to the List

Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of chloroprene rubber, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add chloroprene rubber to the List. According to the petition, the taxable chemicals butadiene, chlorine, and sodium hydroxide constitute 100 percent by weight of the materials used to produce chloroprene rubber, based on the predominant method of production.

(a) *Determination.* Chloroprene rubber is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing chloroprene rubber is through polymerization of chloroprene initiated by a radical initiator in an emulsion process. Chloroprene monomer is made from butadiene by first reacting it with chlorine in the gas phase at ca 500 K to form 3,4-dichlorobut-1-ene and 1,4-dichlorobut-2-ene. The former, on reaction with sodium hydroxide, yields chloroprene monomer.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The chloroprene rubber petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14691) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals butadiene, chlorine, and sodium hydroxide constitute more than 20 percent by weight of the materials used in the production of chloroprene rubber, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of chloroprene rubber to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$10.51 per ton. The conversion factors for the taxable chemicals used in the production of chloroprene rubber are 0.61 for butadiene, 0.80 for chlorine, and 0.45 for sodium hydroxide. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical by the tax rate for that taxable chemical: $((0.61 \times \$9.74) + (0.80 \times \$5.40) + (0.45 \times \$0.56) = \$10.51)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.49.0000

(ii) *Schedule B number:* 4002.49.0000

(iii) *CAS number:* 9010-98-4

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 4002.99.0000

(ii) *Schedule B number:* 4002.99.0000

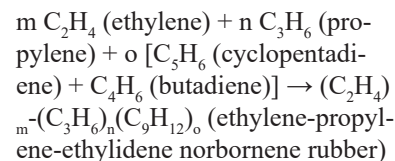
4. Determination to Add Ethylene-propylene-ethylidene Norbornene Rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o; m=56.82, n=40.46, o=2.71)$ to the List

Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o; m=56.82, n=40.46, o=2.71)$, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o; m=56.82, n=40.46, o=2.71)$ to the List. According to the petition, the taxable chemicals ethylene, propylene, and butadiene constitute 95.05 percent by weight of the materials used to produce ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o; m=56.82, n=40.46, o=2.71)$, based on the predominant method of production.

(a) *Determination.* Ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o; m=56.82, n=40.46, o=2.71)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing ethylene-propylene-ethylidene norbornene rubber is through the catalytic polymerization of ethylene, propylene, and non-conjugated diene monomers in a solution using various catalysts. Non-conjugated diene monomers include ethylidene norbornene and dicyclopentadiene. The non-conjugated diene monomers are produced from cyclopentadiene and butadiene, and cyclopentadiene, respectively.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o)$; $m=56.82$, $n=40.46$, $o=2.71$) petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14695) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals ethylene, propylene, and butadiene constitute more than 20 percent by weight of the materials used in the production of ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o)$; $m=56.82$, $n=40.46$, $o=2.71$), based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o)$; $m=56.82$, $n=40.46$, $o=2.71$) to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* April 1, 2023

(6) *Tax rate prescribed by the Secretary:* \$9.25 per ton. The conversion factors for the taxable chemicals used in the production of ethylene-propylene-ethylidene norbornene rubber $((C_2H_4)_m-(C_3H_6)_n(C_9H_{12})_o)$; $m=56.82$, $n=40.46$, $o=2.71$) are 0.44 for ethylene, 0.47 for propylene, and 0.04 for butadiene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical by the tax rate for that taxable chemical: $((0.44 \times \$9.74) + (0.47 \times \$9.74) + (0.04 \times \$9.74)) = \9.25 .

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.70.0000

(ii) *Schedule B number:* 4002.70.0000

(iii) *CAS number:* 25038-36-2

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

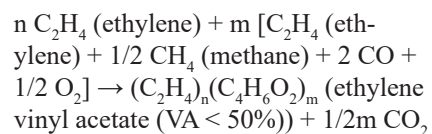
5. Determination to Add Ethylene Vinyl Acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$ to the List

Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$), submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$ to the List. According to the petition, the taxable chemicals ethylene and methane constitute 66.23 percent by weight of the materials used to produce ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$), based on the predominant method of production.

(a) *Determination.* Ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$ is through a solution polymerization employing the monomers of ethylene and vinyl acetate in tert-butanol as a solvent and a radical polymerization initiator.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14688) on April 3, 2025. The Treasury Department and the IRS received no written comments

in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals ethylene and methane constitute more than 20 percent by weight of the materials used in the production of, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$ to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$7.09 per ton. The conversion factors for the taxable chemicals used in the production of ethylene vinyl acetate (VA < 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=78.95$, $m=21.05$ are 0.70 for ethylene and 0.04 for methane. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical by the tax rate for that taxable chemical: $((0.70 \times \$9.74) + (0.04 \times \$6.88)) = \$7.09$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 3901.30.6000

(ii) *Schedule B number:* 3901.30.6000

(iii) *CAS number:* 24937-78-8

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

6. Determination to Add Ethylene Vinyl Acetate (VA ≥ 50%) $((C_2H_4)_n-(C_4H_6O_2)_m)$; $n=75.42$, $m=24.58$ to the List

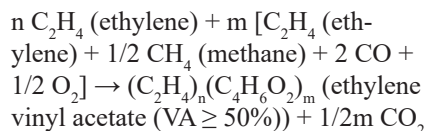
Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters

of ethylene vinyl acetate (VA \geq 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add ethylene vinyl acetate (VA \geq 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$ to the List. According to the petition, the taxable chemicals ethylene and methane constitute 62.91 percent by weight of the materials used to produce ethylene vinyl acetate (VA \geq 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$, based on the predominant method of production.

(a) *Determination.* Ethylene vinyl acetate (VA \geq 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing ethylene vinyl acetate (VA \geq 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$ is through a solution polymerization employing the monomers of ethylene and vinyl acetate in tert-butanol as a solvent and a radical polymerization initiator.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The ethylene vinyl acetate (VA \geq 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14683) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals ethylene and methane constitute more than 20 percent by weight of the materials used in the production of, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of ethylene vinyl acetate (VA \geq 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$ to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$6.77 per ton. The conversion factors for the taxable chemicals used in the production of ethylene vinyl acetate (VA \geq 50%) $((C_2H_4)_n-(C_4H_6O_2)_m; n=75.42, m=24.58)$ are 0.66 for ethylene and 0.05 for methane. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical by the tax rate for that taxable chemical: $((0.66 \times \$9.74) + (0.05 \times \$6.88)) = \$6.77$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 3905.29.0000

(ii) *Schedule B number:* 3905.29.0000

(iii) *CAS number:* 24937-78-8

(2) *The Secretary is unable to confirm the following classification numbers:* Not applicable.

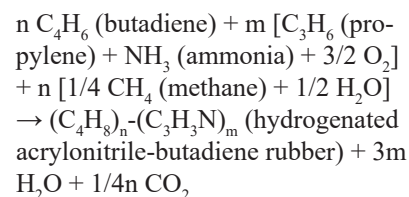
7. Determination to Add Hydrogenated Acrylonitrile-Butadiene Rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$ to the List

Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$ to the List. According to the petition, the taxable chemicals butadiene, propylene, ammonia, and methane constitute 63.48 percent by weight of the materials used to produce hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$, based on the predominant method of production.

(a) *Determination.* Hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing hydrogenated acrylonitrile-butadiene rubber is via catalytic hydrogenation of acrylonitrile-butadiene rubber which is derived from the emulsion polymerization of butadiene and acrylonitrile.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14686) on April 3, 2025. The Treasury Department and the IRS received two non-substantive written comments in response to the notice of filing. One comment received by the IRS recommended prohibiting the manufacture of this substance. The other comment received by the IRS was unrelated to the determination for this substance. The comments did not address whether hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_n-(C_3H_3N)_m; n=22.28, m=38.86)$ meets the weight or value test under section 4672(a)(2)(B). A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals butadiene, propylene, ammonia, and methane constitute more than 20 percent by weight of the materials used in the production of, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of hydrogenated acrylonitrile-butadiene rubber* $(C_4H_8)_n-(C_3H_3N)_m$; $n=22.28$, $m=38.86$ to the List:

(i) *Effective date for purposes of the section 4671 tax* (see section 11.01 of Rev. Proc. 2022-26): January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e)* (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20): July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$9.54 per ton. The conversion factors for the taxable chemicals used in the production of hydrogenated acrylonitrile-butadiene rubber $(C_4H_8)_n-(C_3H_3N)_m$; $n=22.28$, $m=38.86$ are 0.36 for butadiene, 0.49 for propylene, 0.20 for ammonia, and 0.03 for methane. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical by the tax rate for that taxable chemical: $((0.36 \times \$9.74) + (0.49 \times \$9.74) + (0.20 \times \$5.28) + (0.03 \times \$6.88)) = \$9.54$.

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification numbers*:

(i) *HTSUS number*: 4002.59.0000

(ii) *Schedule B number*: 4002.59.0000

(iii) *CAS number*: 308068-83-9

(2) *The Secretary is unable to confirm the following classification numbers*: Not applicable.

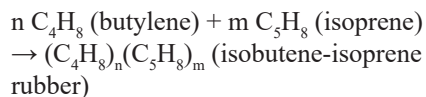
8. Determination To Add Isobutene-isoprene Rubber $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$) to the List

Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$) submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$) to the List. According to the petition, the taxable chemical butylene constitutes 98.91 percent by weight of the materials used to produce isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$), based on the predominant method of production.

(a) *Determination*. Isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$) is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production*: The predominant method of producing isobutene-isoprene rubber is via the cationic copolymerization of butylene with isoprene in the presence of a Friedel-Crafts catalyst at low temperature, around -100°C. The final product contains 0.7 wt% of additives.

(2) *Stoichiometric material consumption equation*:



(3) *Reasons for the determination*: The isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$) petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14689) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical butylene constitutes more than 20 percent by weight of the materials used in the production of isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$), based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of isobutene-isoprene rubber* $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$) to the List:

(i) *Effective date for purposes of the section 4671 tax* (see section 11.01 of Rev. Proc. 2022-26): January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e)* (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20): July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$9.64 per ton. The conversion factor for the butylene used in the production of isobutene-isoprene rubber $((C_4H_8)_n-(C_5H_8)_m$; $n=99.10$, $m=0.90$) is 0.99. The tax rate is calculated by multiplying the conversion factor by the tax rate for butylene: $(0.99 \times \$9.74 = \$9.64)$.

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification numbers*:

(i) *HTSUS number*: 4002.31.0000

(ii) *Schedule B number*: 4002.31.0000

(iii) *CAS number*: 9010-85-9

(2) *The Secretary is unable to confirm the following proposed classification numbers*: Not applicable.

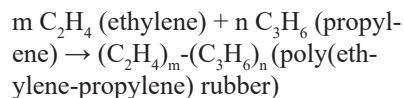
9. Determination to Add Poly(ethylene-propylene) Rubber $((C_2H_4)_m-(C_3H_6)_n$; $m=59.04$, $n=40.96$) to the List

Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n$; $m=59.04$, $n=40.96$), submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n$; $m=59.04$, $n=40.96$) to the List. According to the petition, the taxable chemicals ethylene and propylene constitute 100 percent by weight of the materials used to produce poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n$; $m=59.04$, $n=40.96$), based on the predominant method of production.

(a) *Determination*. Poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n$; $m=59.04$, $n=40.96$) is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production*: The predominant method of producing poly(ethylene-propylene) rubber is through the catalytic polymerization of ethylene and propylene monomers in a solution using various catalysts.

(2) *Stoichiometric material consumption equation*:



(3) *Reasons for the determination*: The poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n$; $m=59.04$, $n=40.96$) petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14689) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

$-(C_3H_6)_n$; $m=59.04$, $n=40.96$) petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14690) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals ethylene and propylene constitute more than 20 percent by weight of the materials used in the production of poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n)$; $m=59.04$, $n=40.96$), based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n)$; $m=59.04$, $n=40.96$ to the List*:

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26)*: January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20)*: July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$9.74 per ton. The conversion factors for the taxable chemicals used in the production of poly(ethylene-propylene) rubber $((C_2H_4)_m-(C_3H_6)_n)$; $m=59.04$, $n=40.96$ are 0.49 for ethylene and 0.51 for propylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.49 \times \$9.74) + (0.51 \times \$9.74)) = \$9.74$.

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification number: CAS number: 9010-71-1*

(2) *The Secretary is unable to confirm the following proposed classification numbers*:

(i) *HTSUS number*: 3901.40.0000

(ii) *Schedule B number*: 3901.40.0000

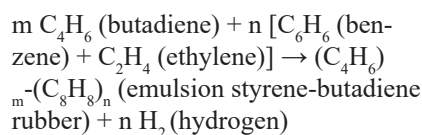
10. Determination to Add Emulsion Styrene-butadiene Rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$, $n=2.53$ to the List

Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$; $n=2.53$), submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$; $n=2.53$) to the List. According to the petition, the taxable chemicals butadiene, benzene, and ethylene constitute 100 percent by weight of the materials used to produce emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$; $n=2.53$), based on the predominant method of production.

(a) *Determination*. Emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$; $n=2.53$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production*: The predominant method of producing emulsion styrene-butadiene rubber is through the emulsion polymerization of butadiene and styrene initiated by free radicals. Styrene monomer is produced by the dehydrogenation of ethylbenzene. Ethylbenzene is produced via a Friedel-Crafts reaction of benzene and ethylene.

(2) *Stoichiometric material consumption equation*:



(3) *Reasons for the determination*: The emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$; $n=2.53$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14686) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition

shows that the taxable chemicals butadiene, benzene, and ethylene constitute more than 20 percent by weight of the materials used in the production of emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$; $n=2.53$), based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$; $n=2.53$ to the List*:

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26)*: January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20)*: July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$9.74 per ton. The conversion factors for the taxable chemicals used in the production of emulsion styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=15.83$; $n=2.53$ are 0.76 for butadiene, 0.18 for benzene, and 0.06 for ethylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.76 \times \$9.74) + (0.18 \times \$9.74) + (0.06 \times \$9.74)) = \9.74 .

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification numbers*:

(i) *HTSUS numbers*: 4002.19.0015 (rubber), 4002.11.0000 (latex)

(ii) *Schedule B numbers*: 4002.19.9000 (rubber), 4002.11.0000 (latex)

(iii) *CAS number*: 9003-55-8

(2) *The Secretary is unable to confirm the following proposed classification numbers*: Not applicable.

11. Determination to Add Solution Styrene-butadiene Rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=67.16$, $n=32.85$ to the List

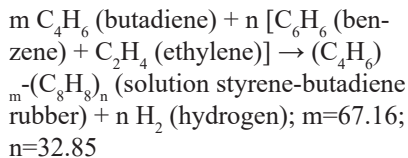
Arlanxeo USA LLC and Arlanxeo Canada Inc., importers and exporters of solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n)$; $m=67.16$; $n=32.85$), submitted a petition in accordance with Rev. Proc.

2022-26 requesting to add solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16; n=32.85)$ to the List. According to the petition, the taxable chemicals butadiene, benzene, and ethylene constitute 100 percent by weight of the materials used to produce solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16; n=32.85)$, based on the predominant method of production.

(a) *Determination.* Solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16; n=32.85)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing solution styrene-butadiene rubber is through the anionic polymerization of butadiene and styrene initiated by alkyl lithium compounds in hexanes as solvent. Styrene monomer is produced by the dehydrogenation of ethylbenzene. Ethylbenzene is produced via a Friedel-Crafts reaction of benzene and ethylene.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16; n=32.85)$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14690) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals butadiene, benzene, and ethylene constitute more than 20 percent by weight of the materials used in the production of solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16; n=32.85)$, based on the predominant method of production.

Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16; n=32.85)$ to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$9.74 per ton. The conversion factors for the taxable chemicals used in the production of solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=67.16; n=32.85)$ are 0.51 for butadiene, 0.36 for benzene, and 0.13 for ethylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.51 \times \$9.74) + (0.36 \times \$9.74) + (0.13 \times \$9.74) = \$9.74)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification number:* CAS number: 9003-55-8

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 4002.19.0016

(ii) *Schedule B number:* 4002.19.1600

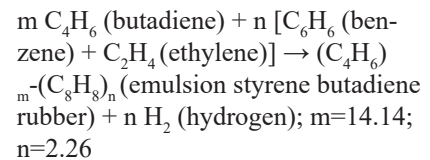
12. Determination to Add Emulsion Styrene Butadiene Rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$ to the List

Michelin North America, Inc., an importer of emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$ to the List. According to the petition, the taxable chemicals butadiene, benzene, and ethylene constitute 100 percent by weight of the materials used to produce emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$, based on the predominant method of production.

(a) *Determination.* Emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$ is through a low temperature, emulsion copolymerization of butadiene and styrene, using fatty and rosin acid soaps as an emulsifier, and organic hydroperoxides as an initiator. Styrene monomer is produced by the dehydrogenation of ethylbenzene. Ethylbenzene is produced via a Friedel-Crafts reaction of benzene and ethylene.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14692) on April 3, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals butadiene, benzene, and ethylene constitute more than 20 percent by weight of the materials used in the production of emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$ to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$9.74 per ton. The conversion factors for the taxable chemicals used in the production of emulsion styrene butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=14.14, n=2.26)$ are 0.76 for butadiene, 0.18 for benzene, and 0.06 for ethylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.76 \times \$9.74) + (0.18 \times \$9.74) + (0.06 \times \$9.74) = \$9.74)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.19.0015

(ii) *Schedule B number:* 4002.19.9000

(iii) *CAS number:* 9003-55-8

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

13. Determination to Add Solution Styrene-butadiene Rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$ to the List

Michelin North America, Inc., an importer of solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$ to the List. According to the petition, the taxable chemicals butadiene, benzene and ethylene constitute 100 percent by weight of the materials used to produce solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$, based on the predominant method of production.

(a) *Determination.* Solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$ is through the continuous polymerization of butadiene and styrene initiated by alkyl lithium compounds in toluene or CMHC (cyclohexane and methylhexane) as solvents. Styrene monomer is produced by the dehydrogenation of ethylbenzene. Ethylbenzene is produced via a Friedel-Crafts reaction of benzene and ethylene.

(2) *Stoichiometric material consumption equation:*

$$m C_4H_6 (\text{butadiene}) + n [C_6H_6 (\text{benzene}) + C_2H_4 (\text{ethylene})] \rightarrow (C_4H_6)_m-(C_8H_8)_n (\text{solution styrene butadiene rubber}) + n H_2 (\text{hydrogen}); m=13.31; n=2.5$$

(3) *Reasons for the determination:* The solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$ petition was filed on February 7, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14693) on April 3, 2025. The Treasury Department and the IRS received one non-substantive written comment on the necessity of the filing to understand its impact in response to the notice of filing. The comment did not address whether solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$ meets the weight or value test under section 4672(a)(2)(B). A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals butadiene, benzene and ethylene constitute more than 20 percent by weight of the materials used in the production of solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$ to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$9.74 per ton. The conversion factors for the taxable chemicals used in the production of solution styrene-butadiene rubber $((C_4H_6)_m-(C_8H_8)_n; m=13.31, n=2.50)$ are 0.73 for butylene, 0.20 for benzene, and 0.07 for ethylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.73 \times \$9.74) + (0.20 \times \$9.74) + (0.07 \times \$9.74) = \$9.74)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.19.0016

(ii) *Schedule B number:* 4002.19.1600

(iii) *CAS number:* 9003-55-8

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

14. **Determination to Add Hydrogenated Acrylonitrile-butadiene Rubber $((C_4H_8)_x-(C_3H_3N)_y-(C_{15}H_{24}O)_a; x=2,783.05, y=1,907.27, a=5.74)$ to the List**

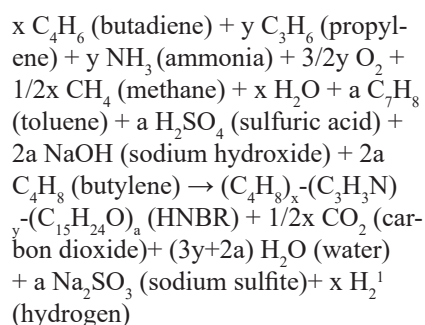
Zeon Chemicals L.P., an importer and exporter of hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_x-(C_3H_3N)_y-(C_{15}H_{24}O)_a; x=2,783.05, y=1,907.27, a=5.74)$, also known as "HNBR," submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add HNBR to the List. According to the petition, the taxable chemicals butadiene, propylene, ammonia, methane, butylene, toluene, sulfuric acid, and sodium hydroxide constitute 67.01 percent by weight of the materials used to produce HNBR, based on the predominant method of production.

(a) *Determination.* Hydrogenated acrylonitrile-butadiene rubber $((C_4H_8)_x-(C_3H_3N)_y-(C_{15}H_{24}O)_a; x=2,783.05, y=1,907.27, a=5.74)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing HNBR is via catalytic hydrogenation of

acrylonitrile-butadiene rubber (“NBR”) in a solution of acetone and in the presence of a catalyst. NBR is derived from the emulsion polymerization of butadiene and acrylonitrile. Acrylonitrile monomer is produced by the SOHIO process (i.e., catalytic ammoxidation of propylene). Hydrogen is made from steam-methane reforming. Butylated hydroxytoluene is produced from the reaction of *p*-cresol with butylene. *p*-Cresol is prepared by a two-step route beginning with the sulfonation of toluene, followed by basic hydrolysis.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The HNBR petition was filed on February 14, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14685) on April 3, 2025, and a correction was published in the *Federal Register* (90 FR 19245) on May 6, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals butadiene, propylene, ammonia, methane, butylene, toluene, sulfuric acid, and sodium hydroxide constitute more than 20 percent by weight of the materials used in the production of HNBR, based on the predominant method of production.

Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of HNBR to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* April 1, 2023

(6) *Tax rate prescribed by the Secretary:* \$10.02 per ton. The conversion factors for the taxable chemicals used in the production of HNBR are 0.58 for butadiene, 0.31 for propylene, 0.13 for ammonia, 0.09 for methane, 0.002 for butylene, 0.002 for toluene, 0.002 for sulfuric acid, and 0.002 for sodium hydroxide. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.58 \times \$9.74) + (0.31 \times \$9.74) + (0.13 \times \$5.28) + (0.09 \times \$6.88) + (0.002 \times \$9.74) + (0.002 \times \$9.74) + (0.002 \times \$0.52) + (0.002 \times \$0.56) = \$10.02$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.59.0000²

(ii) *Schedule B number:* 4002.59.0000

(iii) *CAS number:* 88254-10-8

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

15. Determination to Add Bromobutyl Isobutylene Isoprene Rubber $((\text{C}_4\text{H}_8)_x(\text{C}_5\text{H}_8)_y(\text{Br}_2)_z; x=7071, y=59, z=50)$ to the List

Exxon Mobil Corporation, an exporter of bromobutyl isobutylene isoprene rubber $((\text{C}_4\text{H}_8)_x(\text{C}_5\text{H}_8)_y(\text{Br}_2)_z; x=7071, y=59, z=50)$, also known as “BIIR,” submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add BIIR to the List. According to the petition, the tax-

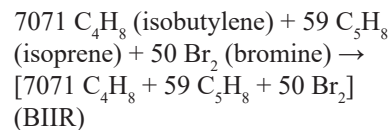
able chemicals isobutylene (an isomer of butylene) and bromine constitute 99.01 percent by weight of the materials used to produce BIIR, based on the predominant method of production.

(a) *Determination.* Bromobutyl isobutylene isoprene rubber $((\text{C}_4\text{H}_8)_x(\text{C}_5\text{H}_8)_y(\text{Br}_2)_z; x=7071, y=59, z=50)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of regular butyl rubber production is using a carbocationic polymerization reaction of isobutylene and a comonomer of isoprene. The catalyst system used is typically composed of aluminum chloride, boron trifluoride or similar dissolved in a methyl chloride solvent. Monomer feed of isobutylene and isoprene dissolved in a methyl chloride solvent are fed to a reactor operated at approximately -100°C to control the rapid exothermic polymerization reaction generating a high molecular weight butyl rubber polymer. To obtain this high molecular weight polymer it is necessary for the feed monomers to be as pure as possible ensuring that the feed system stays as dry as possible. The methyl chloride and unreacted monomers are flashed overhead and recycled back to the feed system while the polymer is precipitated out as a solid which is finished and packaged.

The polymerization process for BIIR starts with the exact same process for regular butyl rubber outlined above. A subsequent halogenation step is then carried out in a well agitated vessel to ionically substitute a bromine molecule to the polymer backbone while the polymer is dissolved in an appropriate solvent. The solvent is then flashed precipitating out a solid which is then baled and packaged.

(2) *Stoichiometric material consumption equation:*



¹ The petition, and consequently the notice of filing, inadvertently omitted “x H₂” from the products side of the stoichiometric material consumption equation. This omission has no impact on the weight or value test. For clarity “x H₂” has been included here.

² The Notice of Filing erroneously stated that the HTSUS number as “4002.59.000” and the Schedule B number as “4002.59.000.” These errors are corrected here.

(3) *Reasons for the determination:* The BIIR petition was filed on April 8, 2025.³ The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20346) on May 13, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals isobutylene (an isomer of butylene) and bromine constitute more than 20 percent by weight of the materials used in the production of BIIR, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of BIIR to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$9.63 per ton. The conversion factors for the taxable chemicals used in the production of BIIR are 0.97 for butylene and 0.02 for bromine. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.97 \times \$9.74) + (0.02 \times \$8.90)) = \$9.63$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.39.00

(ii) *Schedule B number:* 4002.39.00

(iii) *CAS number:* 68441-14-5

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

16. Determination to Add Chlorobutyl Isobutylene Isoprene Rubber ((C₄H₈)_x(C₅H₈)_y(Cl₂)_z; x=7036, y=88, z=70) to the List

Exxon Mobil Corporation, an exporter of chlorobutyl isobutylene isoprene rubber ((C₄H₈)_x(C₅H₈)_y(Cl₂)_z; x=7036, y=88, z=70), also known as “CIIR,” submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add CIIR to the List. According to the petition, the taxable chemicals isobutylene (an isomer of butylene) and chlorine constitute 98.50 percent by weight of the materials used to produce CIIR, based on the predominant method of production.

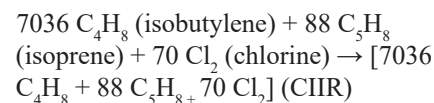
(a) *Determination.* Chlorobutyl isobutylene isoprene rubber ((C₄H₈)_x(C₅H₈)_y(Cl₂)_z; x=7036, y=88, z=70) is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of production of regular butyl rubber is using a carbocationic polymerization reaction of isobutylene and a comonomer of isoprene. The catalyst system used is typically composed of aluminum chloride, boron trifluoride or similar with an initiator dissolved in a methyl chloride solvent. Monomer feed of isobutylene and isoprene dissolved in a methyl chloride solvent are fed to a reactor operated at approximately -100°C to control the rapid exothermic polymerization reaction generating a high molecular weight regular butyl rubber polymer. To obtain this high molecular weight polymer it is necessary for the feed monomers to be as pure as possible as well as ensuring that the feed system stays as dry as possible. The methyl chloride and unreacted monomers are flashed overhead and recycled back to the feed system while the polymer is precipitated out as a solid which is then baled and packaged.

The polymerization process for CIIR starts with the exact same process for regular butyl rubber outlined above. A subsequent halogenation step is then carried out in a well agitated vessel to ionically substitute a chlorine molecule to the polymer backbone while the polymer is dissolved

in an appropriate solvent. The solvent is then flashed, precipitating out a solid which is then baled and packaged.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The CIIR petition was filed on April 8, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20350) on May 13, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals isobutylene (an isomer of butylene) and chlorine constitute more than 20 percent by weight of the materials used in the production of CIIR, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of CIIR to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$9.50 per ton. The conversion factors for the taxable chemicals used in the production of CIIR are 0.97 for butylene and 0.01 for chlorine. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.97 \times \$9.74) + (0.01 \times \$5.40)) = \$9.50$.

³The Notice of Filing erroneously stated the year of filing as 2023. This error is corrected here.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 4002.39.00

(ii) *Schedule B number:* 4002.39.00

(iii) *CAS number:* 68081-82-3

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

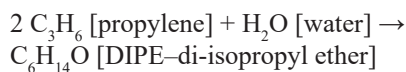
17. Determination to Add DIPE–Di-isopropyl Ether to the List

Exxon Mobil Corporation, an exporter of DIPE–di-isopropyl ether submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add DIPE–di-isopropyl ether to the List. According to the petition, the taxable chemical propylene constitutes 82.40 percent by weight of the materials used to produce DIPE–di-isopropyl ether, based on the predominant method of production.

(a) *Determination.* DIPE–di-isopropyl ether is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* DIPE–di-isopropyl ether is produced via isopropyl alcohol (IPA) production using a two-step indirect hydration process. A mixed propane/propylene stream is reacted with aqueous sulfuric acid to form a H₂SO₄/propylene extract. The formed isopropyl hydrogen sulfate is further reacted with additional IPA under acidic conditions to form DIPE–di-isopropyl ether such that two moles of isopropanol are converted to one mole of DIPE–di-isopropyl ether and one mole of water.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The DIPE–di-isopropyl ether petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21126) on May 16, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical propylene constitutes more than 20 percent by weight of the materials used in the production of DIPE–di-isopropyl ether, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of DIPE–di-isopropyl ether to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$7.99 per ton. The conversion factor for the propylene used in the production of DIPE–di-isopropyl ether is 0.82. The tax rate is calculated by multiplying the conversion factor by the tax rate for propylene: (0.82 x \$9.74 = \$7.99).

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 2909.19.18.00

(ii) *Schedule B number:* 2909.19.18.00

(iii) *CAS number:* 108-20-3

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

18. Determination to Add Di-isodecyl Phthalate to the List

Exxon Mobil Corporation, an exporter of di-isodecyl phthalate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add di-isodecyl phthalate to the List. According to the petition, the taxable chemicals propylene and orthoxylene (an isomer of xylene) constitute 64.50 percent by weight of the materials used to produce di-isodecyl phthalate, based on the predominant method of production.

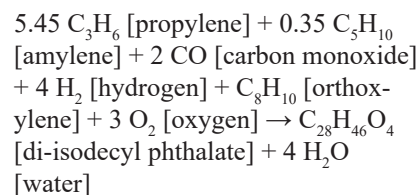
(a) *Determination.* Di-isodecyl phthalate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing di-isodecyl phthalate is via esterification.

This process can be readily carried out in heated kettles with agitation and provision for water takeoff. Esterification catalysts (e.g., sulfuric acid or p-toluene-sulfonic acid) speed the reaction and are neutralized, washed, and then removed. The purity requirements for commercial plasticizers are very high; phthalate esters are usually colorless and are mostly odorless. In the case of phthalates, the esterification is carried out through the reaction of phthalic anhydride and 2-ethylhexanol to produce dioctyl phthalate (DOP).

This reaction usually requires an excess of alcohol, which is readily recycled. Analogous syntheses yield aliphatic dicarboxylic acid esters, benzoates, and trimellitates.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The di-isodecyl phthalate petition was filed on April 8, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20354) on May 13, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals propylene and orthoxylene (an isomer of xylene) constitute more than 20 percent by weight of the materials used in the production of di-isodecyl phthalate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of di-isodecyl phthalate to the List*:

(i) *Effective date for purposes of the section 4671 tax* (see section 11.01 of Rev. Proc. 2022-26): January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e)* (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20): July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$7.31 per ton. The conversion factors for the taxable chemicals used in the production of di-isodecyl phthalate are 0.51 for propylene and 0.24 for xylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.51 \times \$9.74) + (0.24 \times \$9.74)) = \$7.31$.

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification numbers*: Not applicable.

(2) *The Secretary is unable to confirm the following proposed classification numbers*:

(i) *HTSUS number*: 2917.33.00.10

(ii) *Schedule B number*: 2917.33.00.10

(iii) *CAS number*: 68515-49-1

19. Determination to Add Di-isononyl Adipate to the List

Exxon Mobil Corporation, an exporter of di-isononyl adipate, also known as “DINA,” submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add DINA to the List. According to the petition, the taxable chemicals propylene, benzene, and nitric acid constitute 79.20 percent by weight of the materials used to produce DINA, based on the predominant method of production.

(a) *Determination*. Di-isononyl adipate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

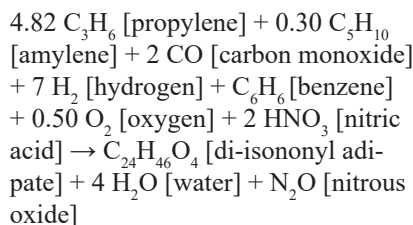
(1) *Predominant method of production*: DINA is produced via esterification. The di-isononyl adipate di-ester is made by reacting primary isononyl (C9) alcohol with adipic acid. The ester is produced by esterification of two moles of isononyl C9

alcohol and one mole of adipic acid in the presence of a catalyst.

By using excess alcohol (up to 30% molar excess of C9 alcohol) and removing the water, the equilibrium is shifted towards the formation of the di-ester. The reactants are charged into a reactor and heated up. The reaction rate is accelerated by using, for example, tetra-n-butyl titanate introduced at high temperature (140°C – 250°C), while removing the water formed.

Excess alcohol is distilled from the ester by vacuum prior to neutralization and recycled into subsequent batches. The final ester is purified by neutralizing with a base such as an aqueous solution of sodium carbonate. The remaining excess water is distilled off and the ester is then filtered using filter agents. The degree of purity of the ester has a minimum 99.0 wt%.

(2) *Stoichiometric material consumption equation*:



(3) *Reasons for the determination*: The DINA petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21131) on May 16, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals propylene, benzene, and nitric acid constitute more than 20 percent by weight of the materials used in the production of DINA, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of DINA to the List*:

(i) *Effective date for purposes of the section 4671 tax* (see section 11.01 of Rev. Proc. 2022-26): January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e)* (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20): July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$7.07 per ton. The conversion factors for the taxable chemicals used in the production of DINA are 0.51 for propylene, 0.20 for benzene, and 0.32 for nitric acid. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.51 \times \$9.74) + (0.20 \times \$9.74) + (0.32 \times \$0.48)) = \7.07 .

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification numbers*:

(i) *HTSUS number*: 2917.12.20.00

(ii) *Schedule B number*: 2917.12.2000

(iii) *CAS number*: 33703–08–1

(2) *The Secretary is unable to confirm the following proposed classification numbers*: Not applicable.

20. Determination to Add Di-isononyl Phthalate to the List

Exxon Mobil Corporation, an exporter of di-isononyl phthalate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add di-isononyl phthalate to the List. According to the petition, the taxable chemicals propylene and orthoxylene (an isomer of xylene) constitute 62.90 percent by weight of the materials used to produce di-isononyl phthalate, based on the predominant method of production.

(a) *Determination*. Di-isononyl phthalate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

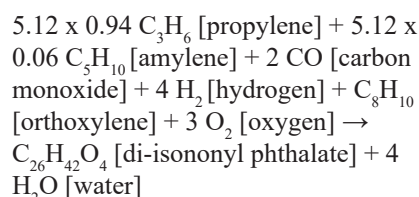
(1) *Predominant method of production*: The predominant method of producing di-isononyl phthalate is via esterification.

Most plasticizers are products of simple esterification reactions, which can be readily carried out in heated kettles with agitation and provision for water takeoff. While some plants produce plasticizers

by such batch methods, newer, highly automated plants operate continuously, particularly if they emphasize a single product. Esterification catalysts (e.g. sulfuric acid or p-toluenesulfonic acid) speed the reaction and are neutralized, washed, and then removed. The purity requirements for commercial plasticizers are very high; phthalate esters are usually colorless and are mostly odorless. The reaction usually requires an excess of alcohol, which is readily recycled. Analogous syntheses yield aliphatic dicarboxylic acid esters, benzoates, and trimellitates.

The hydrogen used for these reactions is not produced from steam-methane reforming; the source is from a POx reactor, which feeds liquids, not methane. The POx process is an industrial process that converts hydrocarbons feeds into syngas (a combination of H₂ and CO gas). The hydrocarbon feed is in the liquid state; it does not feed gas (such as methane) or solids. The unit feeds a variety of liquid hydrocarbons such as paraffins, olefins, and aromatics in the C9-C20 range, obtained from the refinery pipestills and other chemicals units.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The di-isononyl phthalate petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20551) on May 14, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and

other information in the petition shows that the taxable chemicals propylene and orthoxylylene (an isomer of xylene) constitute more than 20 percent by weight of the materials used in the production of di-isononyl phthalate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of di-isononyl phthalate to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$7.11 per ton. The conversion factors for the taxable chemicals used in the production of di-isononyl phthalate are 0.48 for propylene and 0.25 for xylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.48 \times \$9.74) + (0.25 \times \$9.74)) = \$7.11$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:* Not applicable.

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 2917.33.00.50

(ii) *Schedule B number:* 2917.33.00.50

(iii) *CAS number:* 68515-48-0

21. Determination to Add Di-tridecyl Phthalate to the List

Exxon Mobil Corporation, an exporter of di-tridecyl phthalate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add di-tridecyl phthalate to the List. According to the petition, the taxable chemicals propylene and orthoxylylene (an isomer of xylene) constitute 68.10 percent by weight of the materials used to produce di-tridecyl phthalate,

based on the predominant method of production.

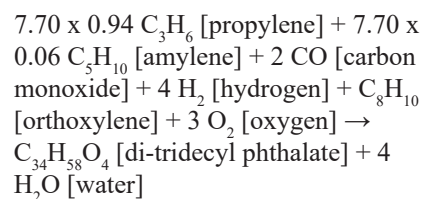
(a) *Determination.* Di-tridecyl phthalate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing di-tridecyl phthalate⁴ is via esterification.

This process can be readily carried out in heated kettles with agitation and provision for water takeoff. Esterification catalysts (e.g., sulfuric acid or p-toluenesulfonic acid) speed the reaction and are neutralized, washed, and then removed. The purity requirements for commercial plasticizers are very high; phthalate esters are usually colorless and are mostly odorless. In the case of phthalates, the esterification is carried out through the reaction of phthalic anhydride and 2-ethylhexanol to produce dioctyl phthalate (DOP).

This reaction usually requires an excess of alcohol, which is readily recycled. Analogous syntheses yield aliphatic dicarboxylic acid esters, benzoates, and trimellitates.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The di-tridecyl phthalate petition was filed on April 8, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20352) on May 13, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals pro-

⁴The Notice of Filing for di-tridecyl phthalate had a typographical error misstating the name of the taxable substance in the predominant method of production section. This error is corrected here.

pylene and orthoxylene (an isomer of xylene) constitute more than 20 percent by weight of the materials used in the production of di-tridecyl phthalate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of di-tridecyl phthalate to the List*:

(i) *Effective date for purposes of the section 4671 tax* (see section 11.01 of Rev. Proc. 2022-26): January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e)* (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20): July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$7.50 per ton. The conversion factors for the taxable chemicals used in the production of di-tridecyl phthalate are 0.57 for propylene and 0.20 for xylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.57 \times \$9.74) + (0.20 \times \$9.74)) = \$7.50$.

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification numbers*: Not applicable.

(2) *The Secretary is unable to confirm the following proposed classification numbers*:

(i) *HTSUS number*: 2917.34.01.50

(ii) *Schedule B number*: 2917.34.0150

(iii) *CAS number*: 68515-47-9

22. Determination to Add Ethylene Propylene Diene (EPDM) Rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$ to the List

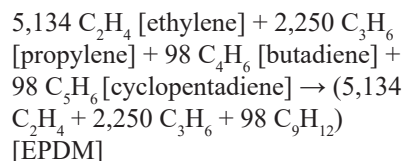
Exxon Mobil Corporation, an exporter of ethylene propylene diene (EPDM) rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add EPDM rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$ to the List. According to the petition, the taxable chemicals ethylene, propylene, and butadiene constitute 97.41 percent by weight of the materials used to produce EPDM rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z;$

$x=5134, y=2250, z=98)$, based on the predominant method of production.

(a) *Determination*. Ethylene propylene diene (EPDM) rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$ is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production*: The predominant method of producing EPDM rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$ is copolymerization of ethylene and propylene with or without a small amount of a non-conjugated diene.

(2) *Stoichiometric material consumption equation*:



(3) *Reasons for the determination*: The EPDM rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$ petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21825) on May 21, 2025. The Treasury Department and the IRS received one non-substantive written comment regarding the effect of EPDM on the environment and wildlife in response to the notice of filing. The comment did not address whether EPDM rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$ meets the weight or value test under section 4672(a)(2)(B). A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals ethylene, propylene, and butadiene constitute more than 20 percent by weight of the materials used in the production of EPDM rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of EPDM rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$ to the List*:

(i) *Effective date for purposes of the section 4671 tax* (see section 11.01 of Rev. Proc. 2022-26): January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e)* (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20): July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$9.45 per ton. The conversion factors for the taxable chemicals used in the production of EPDM rubber $((C_2H_4)_x(C_3H_6)_y(C_9H_{12})_z; x=5134, y=2250, z=98)$ are 0.57 for ethylene, 0.38 for propylene, and 0.02 for butadiene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.57 \times \$9.74) + (0.38 \times \$9.74) + (0.02 \times \$9.74)) = \9.45 .

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification numbers*:

(i) *HTSUS number*: 4002.70.00

(ii) *Schedule B number*: 4002.70.0000

(iii) *CAS number*: 25034-71-3

(2) *The Secretary is unable to confirm the following proposed classification numbers*: Not applicable.

23. Determination to Add Isodecyl Alcohol to the List

Exxon Mobil Corporation, an exporter of isodecyl alcohol, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add isodecyl alcohol to the List. According to the petition, the taxable chemical propylene constitutes 72.00 percent by weight of the materials used to produce isodecyl alcohol, based on the predominant method of production.

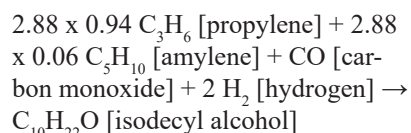
(a) *Determination*. Isodecyl alcohol is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production*: The predominant method of producing isodecyl alcohol is in an oxonation reaction. Plasticizer alcohols, including isodecyl alcohol, are derived from the oxo reaction with branched olefins. Refinery-connected

polygas units generate many of these olefins as purified cuts or fractions.

The hydrogen used for these reactions are not produced from steam-methane reforming. The source of hydrogen is from a Pox reactor, which feeds liquids, not methane. The Pox process is an industrial process that converts hydrocarbons feeds into syngas (a combination of hydrogen and carbon monoxide gas). The hydrocarbon feed is in the liquid state. The unit feeds a variety of liquid hydrocarbons such as paraffins, olefins, and aromatics in the C5-C20 range, obtained from the refinery pipestills and other chemicals units.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The isodecyl alcohol petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21129) on May 16, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical propylene constitutes more than 20 percent by weight of the materials used in the production of isodecyl alcohol, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of isodecyl alcohol to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$7.01 per ton. The conversion factor for the propylene used in the production of isodecyl alcohol is 0.72. The tax rate is calculated by multiplying the conversion factor by the tax rate for propylene: $(0.72 \times \$9.74 = \$7.01)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification number:* CAS number: 68526-85-2

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 3823.70.60.00

(ii) *Schedule B number:* 3823.70.6000

24. Determination to Add Isodecyl Benzoate to the List

Exxon Mobil Corporation, an exporter of isodecyl benzoate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add isodecyl benzoate to the List. According to the petition, the taxable chemicals propylene and toluene constitute 69.10 percent by weight of the materials used to produce isodecyl benzoate, based on the predominant method of production.

(a) *Determination.* Isodecyl benzoate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

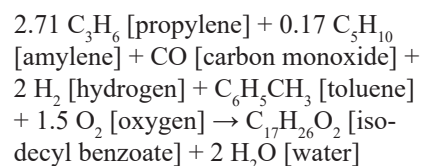
(1) *Predominant method of production:* The predominant method of producing isodecyl benzoate is via esterification. The isodecyl benzoate ester is made by reacting primary isodecyl (C10) alcohol with benzoic acid. The ester is produced by esterification of one mole of isodecyl C10 alcohol and one mole of benzoic acid in the presence of a catalyst.

By using excess alcohol (up to 30% molar excess of C10 alcohol) and removing the water, the equilibrium is shifted towards the formation of the ester. The reactants are charged into a reactor and heated up. The reaction rate is accelerated by using, for example, tetra-n-butyl titanate introduced at high temperature (140°C – 250°C), while removing the water formed.

Excess alcohol is distilled from the ester by vacuum prior to neutralization and recycled into subsequent batches. The final ester is purified by neutralizing

with a base such as an aqueous solution of sodium carbonate. The remaining excess water is distilled off and the ester is then filtered using filter agents. The degree of purity of the ester has a minimum 99.0 wt%.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The isodecyl benzoate petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21130) on May 16, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals propylene and toluene constitute more than 20 percent by weight of the materials used in the production of isodecyl benzoate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of isodecyl benzoate to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$7.60 per ton. The conversion factors for the taxable chemicals used in the production of isodecyl benzoate are 0.43 for propylene and 0.35 for toluene. The tax rate is calculated by adding the products of the conversion factor for each taxable

chemical and the tax rate for that taxable chemical: $((0.43 \times \$9.74) + (0.35 \times \$9.74)) = \$7.60$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:* Not applicable.

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 2916.31.50.00

(ii) *Schedule B number:* 2916.31.0002

(iii) *CAS number:* 131298-44-7

25. Determination to Add Isooctyl Alcohol to the List

Exxon Mobil Corporation, an exporter of isooctyl alcohol, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add isooctyl alcohol to the List. According to the petition, the taxable chemical propylene constitutes 68.10 percent by weight of the materials used to produce isooctyl alcohol, based on the predominant method of production.

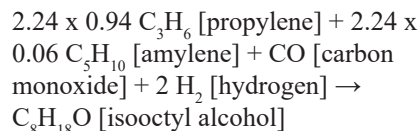
(a) *Determination.* Isooctyl alcohol is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing isooctyl alcohol is in an oxonation reaction. Plasticizer alcohols, including isooctyl alcohol, are derived from the oxo reaction with branched olefins. Refinery-connected polygas units generate many of these olefins as purified cuts or fractions. For example, isooctyl alcohol is produced from heptene, which is an isomeric mixture of C7 olefins that are derived from the reaction of propylene and butylenes. The extent of branching in heptane depends on the reaction conditions and feedstock ratio at the polygas units. Since these conditions are variable, the specifications of the alcohol product may vary among producers.

The hydrogen used for these reactions are not produced from steam-methane reforming. The source of hydrogen is from POx reactor, which feeds liquids, not methane. The POx process is an industrial process that converts hydrocarbons feeds into syngas (a combination of hydrogen and carbon monoxide gas). The hydrocarbon feed is in the liquid state. The unit

feeds a variety of liquid hydrocarbons such as paraffins, olefins, and aromatics in the C5-C20 range, obtained from the refinery pipestills and other chemicals units.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The isooctyl alcohol petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21126) on May 16, 2025. The Treasury Department and the IRS received one non-substantive written comment regarding the importance of evaluating the data in response to the notice of filing. The comment did not address whether isooctyl alcohol meets the weight or value test under section 4672(a)(2)(B). A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical propylene constitutes more than 20 percent by weight of the materials used in the production of isooctyl alcohol, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of isooctyl alcohol to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$6.62 per ton. The conversion factor for the propylene used in the production of isooctyl alcohol is 0.68. The tax rate is calculated by multiplying the conversion

factor by the tax rate for propylene: $(0.68 \times \$9.74 = \$6.62)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 2905.16.00.50

(ii) *Schedule B number:* 2905.16.0050

(iii) *CAS number:* 68526-83-0

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

26. Determination to Add Linear Nonyl Phthalate to the List

Exxon Mobil Corporation, an exporter of linear nonyl phthalate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add linear nonyl phthalate to the List. According to the petition, the taxable chemicals ethylene and orthoxylene (an isomer of xylene) constitute 67.40 percent by weight of the materials used to produce linear nonyl phthalate, based on the predominant method of production.

(a) *Determination.* Linear nonyl phthalate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing linear nonyl phthalate is via esterification.

The linear nonyl phthalate di-ester is made by reacting a mix of primary C9 alcohol with phthalic anhydride. The ester is produced by esterification of two moles of a linear C9 alcohol with one mole of phthalic anhydride in the presence of an acidic catalyst.

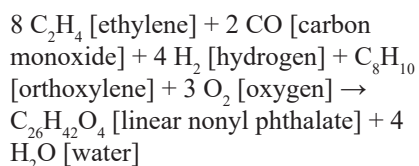
By using excess alcohol (up to 25% molar excess of C9 alcohol) and removing the water, the equilibrium is shifted towards the formation of the di-ester. The reactants are charged into a reactor and heated up. The reaction rate is accelerated by using, for example, tetra-n-butyl titanate introduced at high temperature (140°C – 250°C), while removing the water formed.

The final ester is purified by neutralizing with a base such as an aqueous solution of sodium carbonate. Then excess alcohol is distilled off using steam/nitrogen stripping after neutralization. The remaining excess water is distilled off and the ester is then filtered using filter agents.

The degree of purity of the ester is up to > 99.5 wt%. The overall formula is $C_{26}H_{42}O_4$ and the molecular weight is 418 g/mole, based on an average carbon number of the alkyl groups, with 9 carbons being the predominant number.

The linear C9 alcohol is obtained through hydroformylation of octene. Octene is obtained through ethylene oligomerization. Hydroformylation is the reaction of octene, at high pressure and temperature in the presence of a catalyst, with syngas (a mixture of carbon monoxide and hydrogen). An alcohol with one carbon atom higher versus the starting olefin is obtained, hence octene gives nonanol. The hydroformylation induces 0.3 branches per molecule predominantly on the 2-position carbon of the alcohol. phthalic anhydride is obtained through air oxidation of o.xylene.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The linear nonyl phthalate petition was filed on April 8, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20348) on May 13, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals ethylene and ortho-xylene (an isomer of xylene) constitute more than 20 percent by weight of the materials used in the production of linear nonyl phthalate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of linear nonyl phthalate to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$7.69 per ton. The conversion factors for the taxable chemicals used in the production of linear nonyl phthalate are 0.54 for ethylene and 0.25 for xylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.54 \times \$9.74) + (0.25 \times \$9.74)) = \$7.69$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification number:* CAS number: 68515-45-7

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 2917.33.00.50

(ii) *Schedule B number:* 2917.33.0050

27. Determination to Add Linear Nonyl Undecyl Phthalate to the List

Exxon Mobil Corporation, an exporter of linear nonyl undecyl phthalate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add linear undecyl phthalate to the List. According to the petition, the taxable chemicals ethylene and ortho-xylene (an isomer of xylene) constitute 69.14 percent by weight of the materials used to produce linear nonyl undecyl phthalate, based on the predominant method of production.

(a) *Determination.* Linear nonyl undecyl phthalate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

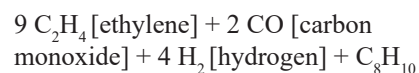
(1) *Predominant method of production:* The predominant method of producing linear nonyl undecyl phthalate is via esterification. The linear nonyl undecyl phthalate di-ester is made by reacting a mix of primary C9 alcohol and primary C11 alcohol with phthalic anhydride. The ester is produced by esterification of one mole of a linear C9 alcohol and one mole of a linear C11 alcohol mix with one mole of phthalic anhydride in the presence of

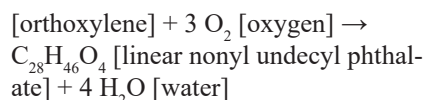
an acidic catalyst. By using excess alcohol (up to 25% molar excess of the alcohol mix) and removing the water, the equilibrium is shifted towards the formation of the di-ester. The reactants are charged into a reactor and heated up. The reaction rate is accelerated by using, for example, tetra-n-butyl titanate introduced at high temperature (140°C – 250°C), while removing the water formed. The final ester is purified by neutralizing with a base such as an aqueous solution of sodium carbonate. Then excess alcohol is distilled off using steam/nitrogen stripping after neutralization. The remaining excess water is distilled off and the ester is then filtered using filter agents. The degree of purity of the ester is up to >99.5 wt%.

The overall formula is $C_{28}H_{46}O_4$ and the molecular weight is 446 g/mole, based on an average carbon number of the alkyl groups, which are C9 and C11 carbons. The linear C9/C11 alcohols are obtained through hydroformylation of octene/decene. octene/decene is obtained through ethylene oligomerization. Hydroformylation is the reaction of octene/decene, at high pressure and temperature in the presence of a catalyst, with syngas (a mixture of carbon monoxide and hydrogen). An alcohol with one carbon atom higher versus the starting olefin is obtained, hence octene/decene gives nonanol/undecanol. The hydroformylation induces 0.3 branches per molecule predominantly on the 2-position carbon of the alcohol. Phthalic anhydride is obtained through air oxidation of ortho-xylene.

The hydrogen used for these reactions is not produced from steam-methane reforming; the source is from a POx reactor, which feeds liquids, not methane. The POx process is an industrial process that converts hydrocarbons feeds into syngas (a combination of hydrogen and carbon monoxide gas). The hydrocarbon feed is in the liquid state; it does not feed gas (such as methane) or solids. The unit feeds a variety of liquid hydrocarbons such as paraffins, olefins, and aromatics in the C5-C20 range, obtained from the refinery pipestills and other chemicals units.

(2) *Stoichiometric material consumption equation:*





(3) *Reasons for the determination:* The linear nonyl undecyl phthalate petition was filed on April 8, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20553) on May 14, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals ethylene and orthoxylyene (an isomer of xylene) constitute more than 20 percent by weight of the materials used in the production of linear nonyl undecyl phthalate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of linear nonyl undecyl phthalate to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$7.89 per ton. The conversion factors for the taxable chemicals used in the production of linear nonyl undecyl phthalate are 0.57 for ethylene and 0.24 for xylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.57 \times \$9.74) + (0.24 \times \$9.74)) = \$7.89$

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 3812.20.10.00

(ii) *Schedule B number:* 3812.20.0000

(iii) *CAS number:* 68515-43-5

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

28. Determination to Add Linear Undecyl Phthalate to the List

Exxon Mobil Corporation, an exporter of linear undecyl phthalate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add linear undecyl phthalate to the List. According to the petition, the taxable chemicals ethylene and orthoxylyene (an isomer of xylene) constitute 70.72 percent by weight of the materials used to produce linear undecyl phthalate, based on the predominant method of production.

(a) *Determination.* Linear undecyl phthalate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing linear undecyl phthalate di-ester is by reacting a mix of primary C11 alcohol with phthalic anhydride. The ester is produced by esterification of two moles of a linear C11 alcohol with one mole of phthalic anhydride in the presence of an acidic catalyst.

By using excess alcohol (up to 25% molar excess of C11 alcohol) and removing the water, the equilibrium is shifted towards the formation of the di-ester. The reactants are charged into a reactor and heated up. The reaction rate is accelerated by using, for example, tetra-n-butyl titanate introduced at high temperature (140°C – 250°C), while removing the water formed.

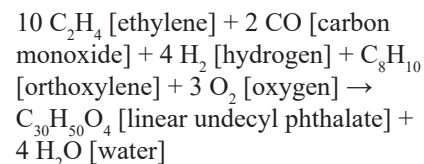
The final ester is purified by neutralizing with a base such as an aqueous solution of sodium carbonate. Then excess alcohol is distilled off using steam/nitrogen stripping after neutralization. The remaining excess water is distilled off and the ester is then filtered using filter agents.

The degree of purity of the ester is up to >99.5 wt%. The overall formula is $\text{C}_{30}\text{H}_{50}\text{O}_4$ and the molecular weight is 474 g/mole, based on an average carbon number of the alkyl groups, with 11 carbons being the predominant number.

The linear C11 alcohol is obtained through hydroformylation of decene.

Decene is obtained through ethylene oligomerization. Hydroformylation is the reaction of decene, at high pressure and temperature in the presence of a catalyst, with syngas (a mixture of carbon monoxide and hydrogen). An alcohol with one carbon atom higher versus the starting olefin is obtained, hence decene gives undecanol. The hydroformylation induces 0.3 branches per molecule predominantly on the 2-position carbon of the alcohol. Phthalic anhydride is obtained through air oxidation of o.xylene.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The linear undecyl phthalate petition was filed on April 8, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20353) on May 13, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals ethylene and orthoxylyene (an isomer of xylene) constitute more than 20 percent by weight of the materials used in the production of linear undecyl phthalate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of linear undecyl phthalate to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$7.89 per ton. The conversion factors for the taxable chemicals used in the production of linear undecyl phthalate are 0.59 for ethylene and 0.22 for xylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.59 \times \$9.74) + (0.22 \times \$9.74)) = \$7.89$

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:* Not applicable.

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 2917.33.00.50

(ii) *Schedule B number:* 2917.33.00.50

(iii) *CAS number:* 3648-20-2

29. Determination to Add Linear Nonyl Tri-mellitate to the List

Exxon Mobil Corporation, an exporter of linear nonyl tri-mellitate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add linear nonyl tri-mellitate to the List. According to the petition, the taxable chemical ethylene constitutes 53.90 percent by weight of the materials used to produce linear nonyl tri-mellitate, based on the predominant method of production.

(a) *Determination.* Linear nonyl tri-mellitate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of production of linear nonyl tri-mellitate is using an esterification reaction. The linear nonyl tri-mellitate tri-ester is made by reacting primary C9 alcohol with trimellitic anhydride. The ester is produced by esterification of three moles of a linear C9 alcohol and one mole of trimellitic anhydride in the presence of an acidic catalyst.

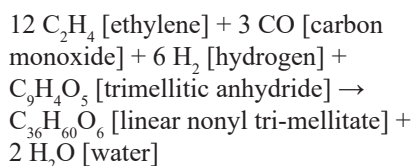
By using excess alcohol (up to 30% molar excess of C9 alcohol) and removing the water, the equilibrium is shifted towards the formation of the tri-ester. The reactants are charged into a reactor and heated up. The reaction rate is accelerated by using, for example, tetra-n-butyl titanate introduced at high temperature (140°C – 250°C), while removing the water formed.

Excess alcohol is distilled from the ester by vacuum prior to neutralization and recycled into subsequent batches. The final ester is purified by neutralizing with a base such as an aqueous solution of sodium carbonate. The remaining excess water is distilled off and the ester is then filtered using filter agents.

The degree of purity of the ester has a minimum 99.0 wt%. The overall formula is $C_{36}H_{60}O_6$ and the molecular weight is 589 g.mol⁻¹, based on the carbon numbers of the alkyl groups, with 9 carbons being the predominant number and the average (>97% C9). The alkyl groups typically have methyl- or ethyl- branching, with on average 0.3 branches per molecule typically found on the second carbon of the alkyl chain closest to the aromatic ring.

The linear C9 alcohol is obtained through hydroformylation of octene. Octene is obtained through ethylene oligomerization. Hydroformylation is the reaction of octene at high pressure and temperature in the presence of a catalyst with syngas (a mixture of carbon monoxide and hydrogen). An alcohol with one carbon atom higher versus the starting olefin is obtained, hence octene gives nonanol. The hydroformylation induces 0.3 branches per molecule predominantly on the two-position carbon of the alcohol. Trimellitic anhydride is obtained through air oxidation of 1,2,4-trimethylbenzene.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The linear nonyl tri-mellitate petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21125) on May 16, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation

and other information in the petition shows that the taxable chemical ethylene constitutes more than 20 percent by weight of the materials used in the production of linear nonyl tri-mellitate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of linear nonyl tri-mellitate to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$5.55 per ton. The conversion factor for the ethylene used in the production of linear nonyl tri-mellitate is 0.57. The tax rate is calculated by multiplying the conversion factor by the tax rate for ethylene: $(0.57 \times \$9.74 = \$5.55)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 2917.39.20.00

(ii) *Schedule B number:* 2917.39.2000

(iii) *CAS number:* 220582-53-6

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

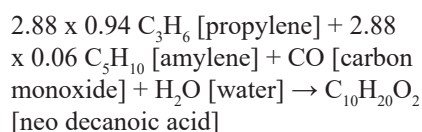
30. Determination to Add Neo Decanoic Acid to the List

Exxon Mobil Corporation, an exporter of neo decanoic acid, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add neo decanoic acid to the List. According to the petition, the taxable chemical propylene constitutes 66.20 percent by weight of the materials used to produce neo decanoic acid, based on the predominant method of production.

(a) *Determination.* Neo decanoic acid is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of production of neo decanoic acid is Koch synthesis.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The neo decanoic acid petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21824) on May 21, 2025. The Treasury Department and the IRS received one non-substantive written comment cautioning against the danger of producing the substance in response to the notice of filing. The comment did not address whether neo decanoic acid meets the weight or value test under section 4672(a)(2)(B). A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical propylene constitutes more than 20 percent by weight of the materials used in the production of neo decanoic acid, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of neo decanoic acid to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$6.43 per ton. The conversion factor for the propylene used in the production of neo decanoic acid is 0.66. The tax rate is calculated by multiplying the conversion factor by the tax rate for propylene: $(0.66 \times \$9.74 = \$6.43)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification number: CAS number:* 26896-20-8

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 2915.90.18.00

(ii) *Schedule B number:* 2915.90.0000

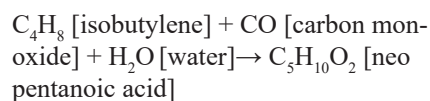
31. Determination to Add Neo Pentanoic Acid to the List

Exxon Mobil Corporation, an exporter of neo pentanoic acid, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add neo pentanoic acid to the List. According to the petition, the taxable chemical isobutylene (an isomer of butylene) constitutes 54.90 percent by weight of the materials used to produce neo pentanoic acid, based on the predominant method of production.

(a) *Determination.* Neo pentanoic acid is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing neo pentanoic acid is via Koch synthesis. Isobutylene is reacted with carbon monoxide at >1000 psig and a highly acidic (Lewis acid) catalyst (Koch reaction) in a continuous, stirred tank reactor. The acid is sent to a distillation tower finishing section. Light rejects (paraffins, olefins, and light acids) are removed, prime neopentanoic acid is recovered at high purity (>99.7 wt%), and acidic byproducts removed.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The neo pentanoic acid petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20346) on May 13, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and

other information in the petition shows that the taxable chemical isobutylene (an isomer of butylene) constitutes more than 20 percent by weight of the materials used in the production of neo pentanoic acid, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of neo pentanoic acid to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$5.36 per ton. The conversion factor for the butylene used in the production of neo pentanoic acid is 0.55. The tax rate is calculated by multiplying the conversion factor by the tax rate for butylene: $(0.55 \times \$9.74 = \$5.36)$

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 2915.60.50.00

(ii) *Schedule B number:* 2915.60.0000

(iii) *CAS number:* 75-98-9

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

32. Determination to Add Nonene to the List

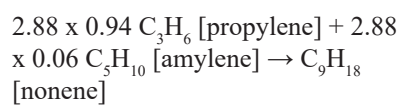
Exxon Mobil Corporation, an exporter of nonene, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add nonene to the List. According to the petition, the taxable chemical propylene constitutes 90.50 percent by weight of the materials used to produce nonene, based on the predominant method of production.

(a) *Determination.* Nonene is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing nonene is oligomerization.

Nonene (C₉H₁₈) and tetramer (C₁₂H₂₄) are olefins that are obtained by oligomerization of feedstock that contains propylene. Each product actually contains several isomeric olefins with varying degrees of branching and different positions of the olefinic double bond. Refinery-generated propylene is of sufficient quality to be used as the feedstock material. The most common process initiates the reaction with a supported phosphoric acid catalyst at temperatures ranging from 120°C to 225°C. Reaction temperature and feed composition determine the range of olefins in a given product stream. If the feedstock is a propylene-rich C3 stream, C9 and C12 olefins are the dominant products. Some processes that use a mixed C3/C4 feed generate a spectrum of products that also includes heptene (C7) and octene (C8). Distillation separates the mix into the desired product fractions. Nonene and tetramer have distillation ranges of 127°C-149°C and 182°C-215°C, respectively. Assuming 83 percent and 79 percent of theoretical yield for production of nonene and tetramer, respectively, 1.21 and 1.27 units of propylene are consumed per unit of nonene and tetramer produced, respectively.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The nonene petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21826) on May 21, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical propyl-

ene constitutes more than 20 percent by weight of the materials used in the production of nonene, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of nonene to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$8.77 per ton. The conversion factor for the propylene used in the production of nonene is 0.90. The tax rate is calculated by multiplying the conversion factor by the tax rate for propylene: (0.90 x \$9.74 = \$8.77).

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification number:* CAS number: 68526-55-6⁵

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 2901.29.50.00

(ii) *Schedule B number:* 2901.29.6000

33. Determination To Add Regular Butyl Rubber ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88) to the List

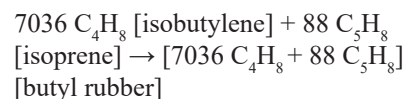
Exxon Mobil Corporation, an exporter of regular butyl rubber ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88), submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add regular butyl rubber ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88) to the List. According to the petition, the taxable chemical isobutylene (an isomer of butylene) constitutes 98.50 percent by weight of the materials used to produce regular butyl rubber, based on the predominant method of production.

(a) *Determination.* Regular butyl rubber ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88) is added to the list of taxable substances

under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing regular butyl rubber ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88) is via cationic copolymerization of isobutylene with isoprene in the presence of a catalyst. The catalyst system used is typically composed of aluminum chloride, boron trifluoride or similar with an initiator dissolved in a methyl chloride solvent. Monomer feed of isobutylene and isoprene dissolved in a methyl chloride solvent are fed to a reactor operated at approximately -100°C to control the rapid exothermic polymerization reaction generating a high molecular weight regular butyl rubber polymer. To obtain this high molecular weight polymer, it is necessary for the feed monomers to be as pure as possible as well as ensuring that the feed system stays as dry as possible. The methyl chloride and unreacted monomers are flashed overhead and recycled back to the feed system while the polymer is precipitated out as a solid which is baled and packaged.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The regular butyl rubber ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88) petition was filed on April 8, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20347) on May 13, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical isobutylene (an isomer of butylene) constitutes more than 20 percent by weight of the materials used in the production of regular butyl rubber ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88), based on

⁵The Notice of Filing for propylene erroneously stated that the CAS number is "68526-55-63." This error is corrected here.

the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of regular butyl rubber* ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88) to the List:

(i) *Effective date for purposes of the section 4671 tax* (see section 11.01 of Rev. Proc. 2022-26): January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e)* (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20): July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$9.64 per ton. The conversion factor for the butylene used in the production of regular butyl rubber ((C₄H₈)_x(C₅H₈)_y; x=7036, y=88) is 0.99. The tax rate is calculated by multiplying the conversion factor by the tax rate for butylene: (0.99 x \$9.74 = \$9.64).

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification numbers*:

(i) *HTSUS number*: 4002.31.0000

(ii) *Schedule B number*: 4002.31.0000

(iii) *CAS number*: 9010-85-9

(2) *The Secretary is unable to confirm the following proposed classification numbers*: Not applicable.

34. Determination to Add Tridecyl Alcohol to the List

Exxon Mobil Corporation, an exporter of tridecyl alcohol, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add tridecyl alcohol to the List. According to the petition, the taxable chemical propylene constitutes 75.90 percent by weight of the materials used to produce tridecyl alcohol, based on the predominant method of production.

(a) *Determination*. Tridecyl alcohol is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

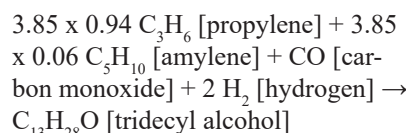
(1) *Predominant method of production*: The predominant method of producing tridecyl alcohol is oxonation.

Tridecyl alcohol is derived from the oxo reaction with branched olefins. Refinery-connected polygas units generate

many of these olefins as purified cuts or fractions.

Most commercial plants for hydroformylation of higher olefins use only cobalt hydrocarbonyl or modified cobalt-phosphine catalysts. Separation of Rh catalysts from higher aldehydes or alcohols is more difficult and expensive. In most cases for the plasticizer and detergent alcohol ranges (C₆-C₁₅), producers hydrogenate the aldehydes, which have no commercial significance, to alcohols.

(2) *Stoichiometric material consumption equation*:



(3) *Reasons for the determination*: The tridecyl alcohol petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21824) on May 21, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical propylene constitutes more than 20 percent by weight of the materials used in the production of tridecyl alcohol, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination*: September 15, 2025.

(5) *Effective dates for addition of tridecyl alcohol to the List*:

(i) *Effective date for purposes of the section 4671 tax* (see section 11.01 of Rev. Proc. 2022-26): January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e)* (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20): July 1, 2022

(6) *Tax rate prescribed by the Secretary*: \$7.40 per ton. The conversion factor for the propylene used in the production

of tridecyl alcohol is 0.76. The tax rate is calculated by multiplying the conversion factor by the tax rate for propylene: (0.76 x \$9.74 = \$7.40).

(b) *Classification numbers*.

(1) *The Secretary has no basis to object to the following proposed classification number*: CAS number: 68526-86-3

(2) *The Secretary is unable to confirm the following proposed classification numbers*:

(i) *HTSUS number*: 3823.70.60.00

(ii) *Schedule B number*: 3823.70.6000

35. Determination to Add Tri-isononyl Tri-mellitate to the List

Exxon Mobil Corporation, an exporter of tri-isononyl tri-mellitate, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add tri-isononyl tri-mellitate to the List. According to the petition, the taxable chemical propylene constitutes 47.30 percent by weight of the materials used to produce tri-isononyl tri-mellitate, based on the predominant method of production.

(a) *Determination*. Tri-isononyl tri-mellitate is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production*: The predominant method of producing tri-isononyl tri-mellitate is via esterification.

This process can be readily carried out in heated kettles with agitation and provision for water takeoff. Esterification catalysts (e.g., sulfuric acid or p-toluenesulfonic acid) speed the reaction and are neutralized, washed, and then removed. The purity requirements for commercial plasticizers are very high; phthalate esters are usually colorless and are mostly odorless. In the case of phthalates, the esterification is carried out through the reaction of phthalic anhydride and 2-ethylhexanol to produce dioctyl phthalate (DOP).

This reaction usually requires an excess of alcohol, which is readily recycled. Analogous syntheses yield aliphatic dicarboxylic acid esters, benzoates, and trimellitates.

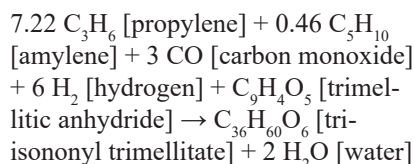
The tri-isononyl tri-mellitate tri-ester is made by reacting primary isononyl (C₉) alcohol with trimellitic anhydride. The ester is produced by esterification of three

moles of isononyl C9 alcohol and one mole of trimellitic anhydride in the presence of a catalyst.

By using excess alcohol (up to 30% molar excess of C9 alcohol) and removing the water, the equilibrium is shifted towards the formation of the tri-ester. The reactants are charged into a reactor and heated up. The reaction rate is accelerated by using, for example, tetra-n-butyl titanate introduced at high temperature (140°C-250°C), while removing the water formed.

Excess alcohol is distilled from the ester by vacuum prior to neutralization and recycled into subsequent batches. The final ester is purified by neutralizing with a base such as an aqueous solution of sodium carbonate. The remaining excess water is distilled off and the ester is then filtered using filter agents. The degree of purity of the ester has a minimum 99.0 wt%.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The tri-isononyl tri-mellitate petition was filed on May 1, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 21827) on May 21, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical propylene constitutes more than 20 percent by weight of the materials used in the production of tri-isononyl tri-mellitate, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of tri-isononyl tri-mellitate to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* July 1, 2022

(6) *Tax rate prescribed by the Secretary:* \$5.06 per ton. The conversion factor for the propylene used in the production of tri-isononyl tri-mellitate is 0.52. The tax rate is calculated by multiplying the conversion factor by the tax rate for propylene: $(0.52 \times \$9.74 = \$5.06)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 2917.39.20.00

(ii) *Schedule B number:* 2917.39.2000

(iii) *CAS number:* 53894-23-8

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

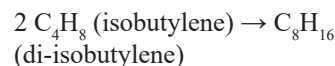
36. Determination to Add Di-isobutylene to the List

TPC Group, Inc., an exporter of di-isobutylene, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add di-isobutylene to the List. According to the petition, the taxable chemical isobutylene (an isomer of butylene) constitutes 100 percent by weight of the materials used to produce di-isobutylene, based on the predominant method of production.

(a) *Determination.* Di-isobutylene is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing di-isobutylene is the cationic dimerization (polymerization) of isobutylene monomers. An acid catalyst (typically a sulfonic acid resin) and polar moderator are used to generate a stable cation on the tertiary carbon of isobutylene. This cation induces a chain growth dimerization that incorporates isobutylene monomer. The catalyst is not a component of the resulting di-isobutylene.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The di-isobutylene petition was filed on April 8, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 20352) on May 13, 2025. The Treasury Department and the IRS received one non-substantive written comment on the necessity of the filing to understand its impact in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical butylene constitutes more than 20 percent by weight of the materials used in the production of di-isobutylene, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of di-isobutylene to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* October 1, 2024

(6) *Tax rate prescribed by the Secretary:* \$9.74 per ton. The conversion factor for the isobutylene (an isomer of butylene) used in the production of di-isobutylene is 1.00. The tax rate is calculated by multiplying the conversion factor by the tax rate for butylene: $(1.00 \times \$9.74 = \$9.74)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification number:* CAS number: 25167-70-8

(2) *The Secretary is unable to confirm the following proposed classification numbers:*

(i) *HTSUS number:* 2901.29.1050

(ii) *Schedule B number:* 2901.29.6000

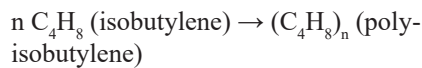
37. Determination to Add Polyisobutylene to the List

TPC Group, Inc., an exporter of polyisobutylene, submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add polyisobutylene to the List. According to the petition, the taxable chemical isobutylene (an isomer of butylene) constitutes 100 percent by weight of the materials used to produce polyisobutylene, based on the predominant method of production.

(a) *Determination.* Polyisobutylene is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing polyisobutylene is the cationic polymerization of isobutylene monomers. A Lewis acid catalyst and proton donating initiator are used to generate a stable cation on the tertiary carbon of isobutylene. This cation induces a chain growth polymerization that continues to transfer the cation to the end of the polymer chain making it available for further incorporation of isobutylene monomer. The size of the polymer is dictated by the reaction temperature such that the lower the temperature the larger the polymer.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The polyisobutylene petition was filed on February 14, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14521) on April 2, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemical isobutylene (an isomer of butylene) constitutes more than 20 percent by weight of

the materials used in the production of polyisobutylene, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of polyisobutylene to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* October 1, 2024

(6) *Tax rate prescribed by the Secretary:* \$9.74 per ton. The conversion factor for the butylene used in the production of polyisobutylene is 1.00. The tax rate is calculated by multiplying the conversion factor by the tax rate for butylene: $(1.00 \times \$9.74 = \$9.74)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 3902.20.10.00 and 3902.20.50.00

(ii) *Schedule B number:* 3902.20.1000 and 3902.20.5000

(iii) *CAS number:* 9003-27-4

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

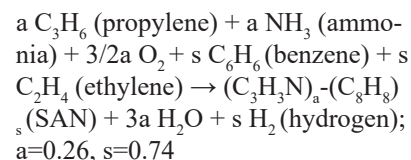
38. Determination to Add Styrene-acrylonitrile ((C₃H₃N)_a-(C₈H₈)_s; a=0.26, s=0.74) to the List

Trinseo LLC, an importer and exporter of styrene-acrylonitrile ((C₃H₃N)_a-(C₈H₈)_s; a=0.26, s=0.74), also known as “SAN,” submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add SAN to the List. According to the petition, the taxable chemicals propylene, ammonia, benzene, and ethylene constitute 88.27 percent by weight of the materials used to produce SAN, based on the predominant method of production.

(a) *Determination.* Styrene-acrylonitrile ((C₃H₃N)_a-(C₈H₈)_s; a=0.26, s=0.74) is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing SAN is through free radical, random copolymerization of 100 percent of the acrylonitrile and styrene monomers. Low levels of unreacted monomers remain bound within the polymer matrix as “residual” components of the product as sold or imported.

(2) *Stoichiometric material consumption equation:*



(3) *Reasons for the determination:* The SAN petition was filed on February 14, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14693) on April 3, 2025, and a correction was published in the *Federal Register* (90 FR 19246) on May 6, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals propylene, ammonia, benzene, and ethylene constitute more than 20 percent by weight of the materials used in the production of SAN, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of SAN to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* April 1, 2024

(6) *Tax rate prescribed by the Secretary:* \$9.91 per ton. The conversion fac-

tors for the taxable chemicals used in the production of SAN are 0.12 for propylene, 0.05 for ammonia, 0.64 for benzene, and 0.23 for ethylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate for that taxable chemical: $((0.12 \times \$9.74) + (0.05 \times \$5.28) + (0.64 \times \$9.74) + (0.23 \times \$9.74) = \$9.91)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 3903.20.0000 (Pellets)

(ii) *Schedule B number:* 3903.20.0000 (Pellets)

(iii) *CAS number:* 9003-54-7

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

39. Determination to Add Acrylonitrile Butadiene Styrene ((C₃H₃N)_a-(C₄H₆)_b-(C₈H₈)_s; a=0.16, b=0.10, s=0.74) to the List

Trinseo LLC, an importer and exporter of acrylonitrile butadiene styrene ((C₃H₃N)_a-(C₄H₆)_b-(C₈H₈)_s; a=0.16, b=0.10, s=0.74), also known as “ABS,” submitted a petition in accordance with Rev. Proc. 2022-26 requesting to add ABS to the List. According to the petition, the taxable chemicals propylene, ammonia, butadiene, benzene, and ethylene constitute 92.40 percent by weight of the materials used to produce ABS, based on the predominant method of production.

(a) *Determination.* Acrylonitrile butadiene styrene ((C₃H₃N)_a-(C₄H₆)_b-(C₈H₈)_s; a=0.16, b=0.10, s=0.74) is added to the list of taxable substances under section 4672(a). Other pertinent information is as follows:

(1) *Predominant method of production:* The predominant method of producing ABS is through free radical, random copolymerization of 100 percent of the acrylonitrile, butadiene, and styrene monomers. Low levels of unreacted monomers remain bound within the polymer matrix as “residual” components of the product as sold or imported.

(2) *Stoichiometric material consumption equation:*

$a \text{ C}_3\text{H}_6 \text{ (propylene)} + a \text{ NH}_3 \text{ (ammonia)} + 3/2a \text{ O}_2 + b \text{ C}_4\text{H}_6 \text{ (butadiene)} + s \text{ C}_6\text{H}_6 \text{ (benzene)} + s \text{ C}_2\text{H}_4 \text{ (ethylene)} \rightarrow (\text{C}_3\text{H}_3\text{N})_a - (\text{C}_4\text{H}_6)_b - (\text{C}_8\text{H}_8)_s \text{ (ABS)} + 3a \text{ H}_2\text{O (water)} + s \text{ H}_2 \text{ (hydrogen)};$
a=0.16, b=0.10, s=0.74

(3) *Reasons for the determination:* The ABS petition was filed on February 14, 2025. The notice of filing summarizing the petition and requesting comments was published in the *Federal Register* (90 FR 14687) on April 3, 2025, and a correction was published in the *Federal Register* (90 FR 19245) on May 6, 2025. The Treasury Department and the IRS received no written comments in response to the notice of filing. A public hearing was neither requested nor held.

The Secretary followed the process in section 4672(a)(2)(B) in making this determination. A review of the stoichiometric material consumption equation and other information in the petition shows that the taxable chemicals propylene, ammonia, butadiene, benzene, and ethylene constitute more than 20 percent by weight of the materials used in the production of ABS, based on the predominant method of production. Therefore, the test in section 4672(a)(2)(B) is satisfied.

(4) *Date of determination:* September 15, 2025.

(5) *Effective dates for addition of ABS to the List:*

(i) *Effective date for purposes of the section 4671 tax (see section 11.01 of Rev. Proc. 2022-26):* January 1, 2026

(ii) *Effective date for purposes of refund claims under section 4662(e) (see sections 11.02 and 11.03 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20):* April 1, 2024

(6) *Tax rate prescribed by the Secretary:* \$9.90 per ton. The conversion factors for the taxable chemicals used in the production of ABS are 0.07 for propylene, 0.03 for ammonia, 0.06 for butadiene, 0.64 for benzene, and 0.23 for ethylene. The tax rate is calculated by adding the products of the conversion factor for each taxable chemical and the tax rate that chemical: $((0.07 \times \$9.74) + (0.03 \times \$5.28) + (0.06 \times \$9.74) + (0.64 \times \$9.74) + (0.23 \times \$9.74) = \$9.90)$.

(b) *Classification numbers.*

(1) *The Secretary has no basis to object to the following proposed classification numbers:*

(i) *HTSUS number:* 3903.30.0000 (Pellets)

(ii) *Schedule B number:* 3903.30.0000 (Pellets)

(iii) *CAS number:* 9003-56-9

(2) *The Secretary is unable to confirm the following proposed classification numbers:* Not applicable.

Krishna P. Vallabhaneni,
Tax Legislative Counsel.

Extension of Replacement Period for Livestock Sold on Account of Drought

Notice 2025-52

SECTION 1. PURPOSE

This notice provides guidance regarding an extension of the replacement period under § 1033(e) of the Internal Revenue Code for livestock sold on account of drought in specified counties.

SECTION 2. BACKGROUND

.01 Nonrecognition of Gain on Involuntary Conversion of Livestock. Section 1033(a) generally provides for nonrecognition of gain when property is involuntarily converted and replaced with property that is similar or related in service or use. Section 1033(e)(1) provides that a sale or exchange of livestock (other than poultry) held by a taxpayer for draft, breeding, or dairy purposes in excess of the number that would be sold following the taxpayer’s usual business practices is treated as an involuntary conversion if the livestock is sold or exchanged solely on account of drought, flood, or other weather-related conditions.

.02 Replacement Period. Section 1033(a)(2)(A) generally provides that gain from an involuntary conversion is recognized only to the extent the amount realized on the conversion exceeds the cost of replacement property purchased during the replacement period. If a sale

or exchange of livestock is treated as an involuntary conversion under § 1033(e) (1) and is solely on account of drought, flood, or other weather-related conditions that result in the area being designated as eligible for assistance by the federal government, § 1033(e)(2)(A) provides that the replacement period ends four years after the close of the first taxable year in which any part of the gain from the conversion is realized. Section 1033(e)(2)(B) provides that the Secretary may extend this replacement period on a regional basis for such additional time as the Secretary determines appropriate if the weather-related conditions that resulted in the area being designated as eligible for assistance by the federal government continue for more than three years. Section 1033(e)(2) is effective for any taxable year with respect to which the due date (without regard to extensions) for a taxpayer's return is after December 31, 2002.

SECTION 3. EXTENSION OF REPLACEMENT PERIOD UNDER § 1033(e)(2)(B)

Notice 2006-82, 2006-2 C.B. 529, provides for extensions of the replacement period under § 1033(e)(2)(B). If a sale or exchange of livestock is treated as an involuntary conversion on account of drought and the taxpayer's replacement period is determined under § 1033(e) (2)(A), the replacement period will be extended under § 1033(e)(2)(B) and Notice 2006-82 until the end of the taxpayer's first taxable year ending after the first drought-free year for the applicable region. For this purpose, the first drought-free year for the applicable region is the first 12-month period that (1) ends August 31; (2) ends in or after the last year of the taxpayer's four-year replacement period determined under § 1033(e)(2)(A); and (3) does not include any weekly period for which exceptional, extreme, or severe drought is reported for any location in the applicable region. The applicable region is the county that experienced the drought conditions on account of which the livestock was sold or exchanged and all counties that are contiguous to that county.

A taxpayer may determine whether exceptional, extreme, or severe drought is reported for any location in the applicable region by reference to U.S. Drought Monitor maps that are produced on a weekly basis by the National Drought Mitigation Center. U.S. Drought Monitor maps are archived at <https://droughtmonitor.unl.edu/Maps/MapArchive.aspx>.

In addition, Notice 2006-82 provides that the Internal Revenue Service will publish in September of each year a list of counties¹ for which exceptional, extreme, or severe drought was reported during the preceding 12 months. Taxpayers may use this list instead of U.S. Drought Monitor maps to determine whether exceptional, extreme, or severe drought has been reported for any location in the applicable region.

The Appendix to this notice contains the list of counties for which exceptional, extreme, or severe drought was reported during the 12-month period ending August 31, 2025. Under Notice 2006-82, the 12-month period ended on August 31, 2025, is not a drought-free year for an applicable region that includes any county on this list. Accordingly, for a taxpayer who qualified for a four-year replacement period for livestock sold or exchanged on account of drought and whose replacement period is scheduled to expire at the end of 2025 (or, in the case of a fiscal year taxpayer, at the end of the taxable year that includes August 31, 2025), the replacement period will be extended under § 1033(e) (2) and Notice 2006-82 if the applicable region includes any county on this list. This extension will continue until the end of the taxpayer's first taxable year ending after a drought-free year for the applicable region.

SECTION 4. DRAFTING INFORMATION

The principal author of this notice is personnel from the Office of Associate Chief Counsel (Income Tax & Accounting). For further information regarding this notice, please contact the Office of Associate Chief Counsel (Income Tax & Accounting), Branch 8 at (202) 317-7009 (not a toll-free number).

APPENDIX

Alabama

Counties of Autauga, Baldwin, Barbour, Bibb, Blount, Bullock, Butler, Calhoun, Chambers, Cherokee, Chilton, Choctaw, Clarke, Clay, Cleburne, Coffee, Colbert, Conecuh, Coosa, Covington, Crenshaw, Cullman, Dale, Dallas, DeKalb, Elmore, Escambia, Etowah, Fayette, Franklin, Geneva, Greene, Hale, Henry, Houston, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Lee, Limestone, Lowndes, Macon, Madison, Marengo, Marion, Marshall, Mobile, Monroe, Montgomery, Morgan, Perry, Pickens, Pike, Randolph, Russell, Saint Clair, Shelby, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, Washington, Wilcox, and Winston.

Arizona

Counties of Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, and Yuma.

Arkansas

Counties of Arkansas, Ashley, Baxter, Benton, Boone, Bradley, Calhoun, Carroll, Chicot, Clark, Cleburne, Cleveland, Columbia, Conway, Crawford, Crittenden, Dallas, Desha, Faulkner, Franklin, Fulton, Garland, Grant, Hempstead, Hot Spring, Howard, Independence, Izard, Jefferson, Johnson, Lafayette, Lee, Lincoln, Little River, Logan, Lonoke, Madison, Marion, Miller, Mississippi, Monroe, Montgomery, Nevada, Newton, Ouachita, Perry, Phillips, Pike, Polk, Pope, Prairie, Pulaski, Saline, Scott, Searcy, Sebastian, Sevier, Sharp, Stone, Union, Van Buren, Washington, and Yell.

California

Counties of Imperial, Inyo, Kern, Los Angeles, Mono, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, Siskiyou, and Ventura.

¹ While Notice 2006-82 uses the term "counties," this notice lists other applicable regions as well (e.g., boroughs, parishes, etc.).

Colorado

Counties of Adams, Arapahoe, Archuleta, Baca, Bent, Boulder, Broomfield, Chaffee, Cheyenne, Clear Creek, Conejos, Costilla, Custer, Delta, Denver, Dolores, Douglas, Eagle, El Paso, Fremont, Garfield, Gilpin, Grand, Gunnison, Hinsdale, Huerfano, Jackson, Jefferson, Kiowa, Kit Carson, Lake, La Plata, Larimer, Las Animas, Lincoln, Logan, Mesa, Mineral, Moffat, Montezuma, Montrose, Otero, Ouray, Park, Pitkin, Prowers, Pueblo, Rio Blanco, Rio Grande, Routt, Saguache, San Juan, San Miguel, Sedgwick, Summit, Teller, and Weld.

Connecticut

Counties of Fairfield, Hartford, Litchfield, Middlesex, New Haven, New London, Tolland, and Windham.

Delaware

Counties of Kent, New Castle, and Sussex.

District of Columbia

District of Columbia.

Florida

Counties of Alachua, Bay, Brevard, Broward, Calhoun, Charlotte, Citrus, Collier, DeSoto, Escambia, Flagler, Gadsden, Glades, Gulf, Hardee, Hendry, Hernando, Highlands, Hillsborough, Holmes, Indian River, Jackson, Lake, Lee, Leon, Levy, Liberty, Manatee, Marion, Martin, Miami-Dade, Monroe, Okaloosa, Okeechobee, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Putnam, Saint Johns, Saint Lucie, Santa Rosa, Sarasota, Seminole, Sumter, Volusia, Wakulla, Walton, and Washington.

Georgia

Counties of Banks, Barrow, Bartow, Catoosa, Chattahoochee, Chattooga, Cherokee, Clay, Cobb, Columbia, Dade, Dawson, Decatur, DeKalb, Douglas, Early, Elbert, Fannin, Floyd, Forsyth, Franklin, Fulton, Gilmer, Gordon, Gwin-

nett, Habersham, Hall, Harris, Hart, Jackson, Lincoln, Lumpkin, McDuffie, Miller, Murray, Muscogee, Paulding, Pickens, Polk, Quitman, Rabun, Randolph, Seminole, Stephens, Stewart, Taliaferro, Towns, Union, Walker, Warren, White, Whitfield, and Wilkes.

Hawaii

Counties of Hawaii, Honolulu, Kala-wao, Kauai, and Maui.

Idaho

Counties of Bannock, Bear Lake, Benewah, Bingham, Blaine, Boise, Bonner, Bonneville, Boundary, Butte, Camas, Caribou, Cassia, Clark, Clearwater, Custer, Elmore, Franklin, Fremont, Gooding, Idaho, Jefferson, Jerome, Kootenai, Latah, Lemhi, Lewis, Lincoln, Madison, Minidoka, Nez Perce, Oneida, Owyhee, Power, Shoshone, Teton, Twin Falls, and Valley.

Illinois

Counties of Adams, Alexander, Boone, Brown, Bureau, Calhoun, Carroll, Campaign, Clark, Coles, Cook, DeKalb, Douglas, DuPage, Edgar, Ford, Grundy, Hancock, Iroquois, Jersey, Jo Daviess, Kane, Kankakee, Kendall, Lake, La Salle, Lee, Livingston, McDonough, McHenry, McLean, Madison, Marshall, Massac, Ogle, Peoria, Piatt, Pike, Pope, Pulaski, Putnam, Rock Island, Saint Clair, Schuyler, Stephenson, Tazewell, Union, Vermillion, Whiteside, Will, Winnebago, and Woodford.

Indiana

Counties of Adams, Allen, Benton, Blackford, Carroll, Cass, Clark, Clinton, Dearborn, DeKalb, Delaware, Elkhart, Fountain, Franklin, Fulton, Grant, Howard, Huntington, Jasper, Jay, Jefferson, Jennings, Kosciusko, LaGrange, Lake, LaPorte, Madison, Marshall, Miami, Newton, Noble, Ohio, Porter, Posey, Pulaski, Randolph, Ripley, Saint Joseph, Spencer, Starke, Steuben, Switzerland, Tippecanoe, Tipton, Vanderburgh, Vermillion, Wabash, Warren, Warrick, Wells, White, and Whitley.

Iowa

Counties of Adair, Adams, Allamakee, Audubon, Benton, Black Hawk, Bremer, Buchanan, Buena Vista, Butler, Carroll, Cass, Cedar, Cerro Gordo, Cherokee, Chickasaw, Clay, Clayton, Clinton, Crawford, Delaware, Dickinson, Dubuque, Emmet, Fayette, Floyd, Franklin, Fremont, Greene, Grundy, Guthrie, Hamilton, Hancock, Hardin, Harrison, Howard, Humboldt, Ida, Iowa, Jackson, Johnson, Jones, Kossuth, Linn, Lyon, Marshall, Mills, Mitchell, Monona, Montgomery, O'Brien, Osceola, Page, Palo Alto, Plymouth, Pottawattamie, Poweshiek, Shelby, Sioux, Tama, Webster, Winnebago, Win-neshiek, Woodbury, and Wright.

Kansas

Counties of Allen, Anderson, Atchison, Barber, Bourbon, Brown, Butler, Chase, Chautauqua, Cherokee, Cheyenne, Clark, Clay, Cloud, Comanche, Cowley, Crawford, Decatur, Dickinson, Doniphan, Douglas, Edwards, Elk, Finney, Franklin, Geary, Grant, Greenwood, Hamilton, Harper, Harvey, Jackson, Jefferson, Jewell, Johnson, Kearny, Kingman, Kiowa, Labette, Lane, Leavenworth, Linn, Logan, Lyon, McPherson, Marion, Marshall, Meade, Miami, Mitchell, Montgomery, Morris, Morton, Nemaha, Neosho, Norton, Osage, Osborne, Ottawa, Phillips, Pottawatomie, Pratt, Rawlins, Reno, Republic, Riley, Saline, Scott, Sedgwick, Seward, Shawnee, Sheridan, Sherman, Smith, Stafford, Stanton, Stevens, Sumner, Thomas, Wabaunsee, Wallace, Washington, Wichita, Wilson, Woodson, and Wyandotte.

Kentucky

Counties of Allen, Anderson, Ballard, Boone, Bourbon, Boyd, Boyle, Breckin-ridge, Butler, Caldwell, Calloway, Camp-bell, Carlisle, Carroll, Carter, Christian, Crittenden, Daviess, Elliott, Franklin, Fulton, Gallatin, Grant, Graves, Grayson, Green, Greenup, Hardin, Harrison, Hen-derson, Henry, Hickman, Hopkins, John-son, Kenton, Larue, Lawrence, Living-ston, Logan, Lyon, McCracken, McLean, Magoffin, Marion, Marshall, Martin, Meade, Mercer, Morgan, Muhlenberg,

Nelson, Ohio, Oldham, Owen, Pendleton, Scott, Shelby, Simpson, Taylor, Todd, Trigg, Trimble, Union, Warren, Washington, Webster, and Woodford.

Louisiana

Parishes of Acadia, Allen, Avoyelles, Beauregard, Bienville, Bossier, Caddo, Calcasieu, Cameron, Claiborne, Concordia, De Soto, East Baton Rouge, East Carroll, East Feliciana, Evangeline, Iberville, Jefferson Davis, Lafayette, Lincoln, Morehouse, Pointe Coupee, Saint Helena, Saint Landry, Saint Martin, Tangipahoa, Union, Vermilion, Vernon, Webster, West Baton Rouge, West Carroll, and West Feliciana.

Maine

Counties of Hancock, Kennebec, Knox, Lincoln, Penobscot, Waldo, Washington, and York.

Maryland

City of Baltimore. Counties of Allegany, Anne Arundel, Baltimore, Calvert, Caroline, Carroll, Cecil, Charles, Dorchester, Frederick, Garrett, Harford, Howard, Kent, Montgomery, Prince George's, Queen Anne's, Saint Mary's, Somerset, Talbot, Washington, Wicomico, and Worcester.

Massachusetts

Counties of Berkshire, Bristol, Essex, Franklin, Hampden, Hampshire, Middlesex, Norfolk, Plymouth, Suffolk, and Worcester.

Michigan

Counties of Alcona, Alger, Allegan, Alpena, Antrim, Arenac, Baraga, Barry, Bay, Benzie, Charlevoix, Cheboygan, Chippewa, Clare, Clinton, Crawford, Delta, Dickinson, Eaton, Emmet, Gladwin, Gogebic, Grand Traverse, Gratiot, Hillsdale, Houghton, Huron, Ionia, Iosco, Iron, Isabella, Kalkaska, Kent, Lake, Leelanau, Lenawee, Luce, Mackinac, Manistee, Marquette, Mason, Mecosta, Menominee, Midland, Missaukee, Monroe, Montcalm, Montmorency, Muskegon,

Newaygo, Ogemaw, Ontonagon, Osceola, Oscoda, Otsego, Ottawa, Presque Isle, Roscommon, Saginaw, Sanilac, Schoolcraft, Tuscola, and Wexford.

Minnesota

Counties of Aitkin, Becker, Beltrami, Big Stone, Blue Earth, Brown, Carlton, Cass, Chippewa, Clay, Clearwater, Cook, Cottonwood, Crow Wing, Douglas, Faribault, Fillmore, Grant, Houston, Hubbard, Itasca, Jackson, Koochiching, Lac qui Parle, Lake, Lake of the Woods, Lincoln, Lyon, Mahnommen, Martin, Mille Lacs, Morrison, Mower, Murray, Nicollet, Nobles, Norman, Olmsted, Otter Tail, Pine, Pipestone, Redwood, Renville, Rock, Roseau, Saint Louis, Stevens, Swift, Todd, Traverse, Wabasha, Wadena, Watonwan, Wilkin, Winona, and Yellow Medicine.

Mississippi

Counties of Amite, Attala, Bolivar, Calhoun, Carroll, Chickasaw, Choctaw, Clay, Coahoma, Forrest, George, Greene, Grenada, Holmes, Humphreys, Issaquena, Itawamba, Jackson, Jones, Kemper, Lafayette, Leake, Lee, Leflore, Lowndes, Marshall, Monroe, Montgomery, Neshoba, Noxubee, Oktibbeha, Panola, Perry, Pike, Pontotoc, Quitman, Sharkey, Stone, Sunflower, Tallahatchie, Tishomingo, Tunica, Union, Walthall, Washington, Wayne, Webster, Wilkinson, Winston, and Yalobusha.

Missouri

City of Saint Louis. Counties of Atchison, Audrain, Barry, Barton, Bates, Benton, Bollinger, Buchanan, Camden, Cape Girardeau, Cass, Cedar, Christian, Clay, Clinton, Cole, Crawford, Dade, Dallas, Dent, Douglas, Franklin, Gasconade, Greene, Henry, Hickory, Holt, Jackson, Jasper, Johnson, Knox, Laclede, Lafayette, Lawrence, Lewis, McDonald, Macon, Madison, Maries, Marion, Miller, Mississippi, Moniteau, Monroe, Morgan, New Madrid, Newton, Osage, Ozark, Pettis, Phelps, Pike, Platte, Polk, Pulaski, Ralls, Randolph, Ray, Saint Charles, Saint Clair, Saint Louis, Scott, Shelby, Stoddard, Stone, Taney, Vernon, Wayne, and Webster.

Montana

Counties of Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Daniels, Dawson, Deer Lodge, Fallon, Flathead, Gallatin, Garfield, Glacier, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, McCone, Madison, Meagher, Mineral, Missoula, Park, Phillips, Pondera, Powder River, Powell, Prairie, Ravalli, Richland, Roosevelt, Rosebud, Sanders, Sheridan, Silver Bow, Teton, Toole, Valley, and Wibaux.

Nebraska

Counties of Adams, Antelope, Arthur, Banner, Blaine, Boone, Box Butte, Boyd, Brown, Buffalo, Burt, Butler, Cass, Cedar, Chase, Cherry, Cheyenne, Clay, Colfax, Cuming, Custer, Dakota, Dawes, Dawson, Deuel, Dixon, Dodge, Douglas, Fillmore, Franklin, Frontier, Furnas, Gage, Garden, Garfield, Gosper, Grant, Greeley, Hall, Hamilton, Harlan, Hayes, Hitchcock, Holt, Hooker, Howard, Jefferson, Johnson, Kearney, Keith, Keya Paha, Kimball, Knox, Lancaster, Lincoln, Logan, Loup, McPherson, Madison, Merrick, Morrill, Nance, Nemaha, Nuckolls, Otoe, Pawnee, Perkins, Phelps, Pierce, Platte, Polk, Red Willow, Richardson, Rock, Saline, Sarpy, Saunders, Scotts Bluff, Seward, Sheridan, Sherman, Sioux, Stanton, Thayer, Thomas, Thurston, Valley, Washington, Wayne, Webster, Wheeler, and York.

Nevada

Counties of Clark, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, and White Pine.

New Hampshire

Counties of Cheshire, Hillsborough, Rockingham, and Strafford.

New Jersey

Counties of Atlantic, Bergen, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex, Union, and Warren.

New Mexico

Counties of Bernalillo, Catron, Chaves, Cibola, Colfax, DeBaca, Dona Ana, Eddy, Grant, Guadalupe, Harding, Hidalgo, Lea, Lincoln, Los Alamos, Luna, McKinley, Mora, Otero, Rio Arriba, Roosevelt, Sandoval, San Juan, San Miguel, Santa Fe, Sierra, Socorro, Taos, Torrance, Union, and Valencia.

New York

Counties of Bronx, Columbia, Delaware, Dutchess, Greene, Kings, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Schoharie, Suffolk, Sullivan, Ulster, and Westchester.

North Carolina

Counties of Anson, Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Cherokee, Chowan, Clay, Columbus, Craven, Cumberland, Currituck, Dare, Duplin, Graham, Greene, Haywood, Hoke, Hyde, Jackson, Jones, Lenoir, Macon, Martin, Moore, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Pitt, Richmond, Robeson, Scotland, Swain, Transylvania, Tyrrell, and Washington.

North Dakota

Counties of Adams, Billings, Bottineau, Bowman, Burke, Cass, Dickey, Divide, Dunn, Golden Valley, Grant, Hettinger, McKenzie, McLean, Mercer, Morton, Mountrail, Oliver, Ransom, Renville, Richland, Sargent, Slope, Stark, Ward, and Williams.

Ohio

Counties of Adams, Allen, Ashland, Athens, Auglaize, Belmont, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Columbiana, Coshocton, Crawford, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Gallia, Greene, Guernsey, Hamilton, Hancock, Hardin, Harrison, Henry, Highland, Hocking, Holmes, Huron, Jackson, Jefferson, Knox, Lawrence, Licking, Logan, Lucas, Madison, Mahoning, Marion, Meigs, Mercer, Miami, Monroe, Montgomery, Morgan,

Morrow, Muskingum, Noble, Ottawa, Paulding, Perry, Pickaway, Pike, Portage, Preble, Putnam, Richland, Ross, Sandusky, Scioto, Seneca, Shelby, Stark, Trumbull, Tuscarawas, Union, Van Wert, Vinton, Warren, Washington, Wayne, Williams, Wood, and Wyandot.

Oklahoma

Counties of Adair, Alfalfa, Atoka, Beaver, Beckham, Blaine, Bryan, Caddo, Canadian, Carter, Cherokee, Choctaw, Coal, Comanche, Cotton, Craig, Creek, Custer, Delaware, Dewey, Ellis, Garfield, Garvin, Grady, Grant, Greer, Harmon, Harper, Hughes, Jackson, Jefferson, Johnston, Kay, Kingfisher, Kiowa, Latimer, LeFlore, Lincoln, Logan, Love, McClain, McCurtain, McIntosh, Major, Marshall, Mayes, Murray, Muskogee, Noble, Nowata, Okfuskee, Oklahoma, Okmulgee, Osage, Ottawa, Pawnee, Payne, Pittsburg, Pontotoc, Pottawatomie, Pushmataha, Roger Mills, Rogers, Seminole, Stephens, Texas, Tillman, Tulsa, Wagoner, Washington, Washita, Woods, and Woodward.

Oregon

Counties of Baker, Benton, Clackamas, Clatsop, Columbia, Crook, Curry, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, and Yamhill.

Pennsylvania

Counties of Adams, Allegheny, Beaver, Bedford, Berks, Bucks, Cambria, Carbon, Chester, Columbia, Dauphin, Delaware, Fayette, Franklin, Fulton, Greene, Indiana, Lackawanna, Lancaster, Lawrence, Lebanon, Lehigh, Luzerne, Mercer, Monroe, Montgomery, Montour, Northampton, Northumberland, Philadelphia, Pike, Schuylkill, Somerset, Washington, Wayne, Westmoreland, and York.

Rhode Island

Counties of Kent, Providence, and Washington.

South Carolina

Counties of Abbeville, Anderson, Berkeley, Charleston, Chesterfield, Clarendon, Colleton, Darlington, Dillon, Dorchester, Edgefield, Florence, Georgetown, Greenwood, Horry, Kershaw, Laurens, Lee, McCormick, Marion, Marlboro, Oconee, Pickens, Saluda, Sumter, and Williamsburg.

South Dakota

Counties of Aurora, Beadle, Bennett, Bon Homme, Brookings, Brown, Brule, Buffalo, Butte, Campbell, Charles Mix, Clark, Clay, Codington, Corson, Custer, Davison, Day, Deuel, Dewey, Douglas, Edmunds, Fall River, Faulk, Grant, Gregory, Haakon, Hamlin, Hand, Hanson, Harding, Hughes, Hutchinson, Hyde, Jackson, Jerauld, Jones, Kingsbury, Lake, Lawrence, Lincoln, Lyman, McCook, McPherson, Marshall, Meade, Mellette, Miner, Minnehaha, Moody, Oglala, Lakota, Pennington, Perkins, Potter, Roberts, Sanborn, Spink, Stanley, Sully, Todd, Tripp, Turner, Union, Walworth, Yankton, and Ziebach.

Tennessee

Counties of Anderson, Bedford, Benton, Bledsoe, Blount, Bradley, Campbell, Cannon, Carroll, Cheatham, Chester, Clay, Cocke, Coffee, Cumberland, Davidson, Decatur, DeKalb, Dickson, Dyer, Fentress, Franklin, Gibson, Giles, Grundy, Hamilton, Hardin, Henderson, Henry, Hickman, Houston, Humphreys, Jackson, Jefferson, Knox, Lake, Lauderdale, Lawrence, Lewis, Lincoln, Loudon, McMinn, McNairy, Macon, Marion, Marshall, Maury, Meigs, Monroe, Montgomery, Moore, Morgan, Obion, Overton, Perry, Pickett, Polk, Putnam, Rhea, Roane, Robertson, Rutherford, Scott, Sequatchie, Sevier, Shelby, Smith, Stewart, Sumner, Tipton, Trousdale, Union, Van Buren, Warren, Wayne, Weakley, White, Williamson, and Wilson.

Texas

Counties of Anderson, Andrews, Angelina, Aransas, Archer, Armstrong, Atascosa, Austin, Bailey, Bandera, Bas-

trop, Baylor, Bee, Bell, Bexar, Blanco, Borden, Bosque, Bowie, Brazoria, Brazos, Brewster, Briscoe, Brooks, Brown, Burleson, Burnet, Caldwell, Calhoun, Callahan, Cameron, Camp, Carson, Cass, Castro, Chambers, Cherokee, Childress, Clay, Cochran, Coke, Coleman, Collin, Collingsworth, Colorado, Comal, Concho, Cooke, Coryell, Cottle, Crane, Crockett, Crosby, Culberson, Dallas, Dawson, Deaf Smith, Delta, Denton, DeWitt, Dickens, Dimmit, Donley, Duval, Eastland, Ector, Edwards, Ellis, El Paso, Falls, Fannin, Fayette, Fisher, Floyd, Foard, Fort Bend, Franklin, Freestone, Frio, Gaines, Galveston, Garza, Gillespie, Glasscock, Goliad, Gonzales, Gray, Grayson, Gregg, Grimes, Guadalupe, Hale, Hall, Hardeman, Hardin, Harris, Harrison, Haskell, Hays, Hemphill, Henderson, Hidalgo, Hockley, Hopkins, Houston, Howard, Hudspeth, Hunt, Irion, Jack, Jackson, Jasper, Jeff Davis, Jefferson, Jim Hogg, Jim Wells, Jones, Karnes, Kaufman, Kendall, Kenedy, Kent, Kerr, Kimble, King, Kinney, Kleberg, Knox, Lamar, Lamb, Lampasas, La Salle, Lavaca, Lee, Leon, Liberty, Limestone, Lipscomb, Live Oak, Llano, Loving, Lubbock, Lynn, McCulloch, McLennan, McMullen, Madison, Marion, Martin, Mason, Matagorda, Maverick, Medina, Menard, Midland, Milam, Mills, Mitchell, Montague, Montgomery, Morris, Motley, Nacogdoches, Navarro, Newton, Nolan, Nueces, Ochiltree, Orange, Palo Pinto, Panola, Parker, Parmer, Pecos, Polk, Potter, Presidio, Rains, Randall, Reagan, Real, Red River, Reeves, Refugio, Roberts, Robertson, Rockwall, Runnels, Rusk, San Augustine, San Jacinto, San Patricio, San Saba, Schleicher, Scurry, Shackelford, Shelby, Smith, Starr, Stephens, Sterling, Stonewall, Sutton, Swisher, Tarrant, Taylor, Terrell, Terry, Throckmorton, Titus, Tom Green, Travis, Trinity, Tyler, Upshur, Upton, Uvalde, Val Verde, Van Zandt, Victoria, Walker, Waller, Ward, Washington, Webb, Wharton, Wheeler, Wichita, Wilbarger, Willacy, Williamson, Wilson, Winkler, Wise, Wood, Yoakum, Young, Zapata, and Zavala.

Utah

Counties of Beaver, Box Elder, Cache, Carbon, Daggett, Davis, Duchesne, Emery, Garfield, Grand, Iron, Juab,

Kane, Millard, Morgan, Piute, Rich, Salt Lake, San Juan, Sanpete, Sevier, Summit, Tooele, Uintah, Utah, Wasatch, Washington, and Wayne.

Vermont

Counties of Bennington and Windham.

Virginia

Cities of Alexandria, Chesapeake, Covington, Fairfax, Falls Church, Fredericksburg, Hampton, Harrisonburg, Manassas, Manassas Park, Newport News, Norfolk, Poquoson, Portsmouth, Staunton, Virginia Beach, and Waynesboro. Counties of Accomack, Albemarle, Alleghany, Arlington, Augusta, Bath, Bland, Botetourt, Caroline, Clarke, Craig, Culpeper, Essex, Fairfax, Fauquier, Frederick, Giles, Gloucester, Greene, Highland, King and Queen, King George, King William, Lancaster, Loudoun, Madison, Mathews, Middlesex, Montgomery, Northampton, Northumberland, Orange, Page, Prince William, Pulaski, Richmond, Roanoke, Rockbridge, Rockingham, Shenandoah, Spotsylvania, Stafford, Tazewell, Warren, Westmoreland, and York.

Washington

Counties of Adams, Asotin, Benton, Chelan, Clallam, Clark, Columbia, Cowlitz, Douglas, Ferry, Franklin, Garfield, Grant, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Klickitat, Lewis, Lincoln, Okanogan, Pend Oreille, Pierce, Skagit, Skamania, Snohomish, Spokane, Stevens, Thurston, Walla Walla, Whatcom, Whitman, and Yakima.

West Virginia

Counties of Barbour, Berkeley, Boone, Braxton, Brooke, Cabell, Calhoun, Clay, Doddridge, Fayette, Gilmer, Grant, Greenbrier, Hampshire, Hancock, Hardy, Harrison, Jackson, Jefferson, Kanawha, Lewis, Lincoln, Logan, McDowell, Marion, Marshall, Mason, Mercer, Mineral, Mingo, Monongalia, Monroe, Morgan, Nicholas, Ohio, Pendleton, Pleasants, Pocahontas, Preston, Putnam, Raleigh, Randolph, Ritchie, Roane, Summers, Taylor, Tucker,

Tyler, Upshur, Wayne, Webster, Wetzel, Wirt, Wood, and Wyoming.

Wisconsin

Counties of Ashland, Barron, Bayfield, Brown, Buffalo, Burnett, Crawford, Dodge, Door, Douglas, Florence, Forest, Grant, Green, Iowa, Iron, Jefferson, Keshona, Kewaunee, Lafayette, Langlade, Lincoln, Marathon, Marinette, Menominee, Milwaukee, Oconto, Oneida, Ozaukee, Price, Racine, Rock, Rusk, Sawyer, Shawano, Vernon, Vilas, Walworth, Washburn, Washington, and Waukesha.

Wyoming

Counties of Albany, Big Horn, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Hot Springs, Johnson, Laramie, Lincoln, Natrona, Niobrara, Park, Platte, Sheridan, Sublette, Sweetwater, Teton, Uinta, Washakie, and Weston.

Guam

Island of Guam.

Republic of the Marshall Islands

Atolls of Ailinglapalap, Jaluit, Kwajalein, Utirik, and Wotje.

Federated States of Micronesia

State of Pingelap.

Commonwealth of the Northern Mariana Islands

Islands of Rota, Saipan, and Tinian.

2025-2026 Special Per Diem Rates

Notice 2025-54

SECTION 1. PURPOSE

This annual notice provides the 2025-2026 special *per diem* rates for taxpayers to use in substantiating the amount of ordinary and necessary business expenses

incurred while traveling away from home, specifically (1) the special transportation industry meal and incidental expenses (M&IE) rates, (2) the rate for the incidental expenses only deduction, and (3) the rates and list of high-cost localities for purposes of the high-low substantiation method.

SECTION 2. BACKGROUND

Rev. Proc. 2019-48, 2019-51 I.R.B. 1392 (or successor), provides rules for using a *per diem* rate to substantiate, under § 274(d) of the Internal Revenue Code and § 1.274-5 of the Income Tax Regulations, the amount of ordinary and necessary business expenses paid or incurred while traveling away from home. Taxpayers using the rates and list of high-cost localities provided in this notice must comply with Rev. Proc. 2019-48 (or successor). Notice 2024-68, 2024-41 I.R.B. 729, provides the rates and list of high-cost localities for the period October 1, 2024, to September 30, 2025.

SECTION 3. SPECIAL M&IE RATES FOR TRANSPORTATION INDUSTRY

The special M&IE rates for taxpayers in the transportation industry are \$80 for any locality of travel in the continental United States (CONUS) and \$86 for any locality of travel outside the continental United States (OCONUS). See section 4.04 of Rev. Proc. 2019-48 (or successor).

SECTION 4. RATE FOR INCIDENTAL EXPENSES ONLY DEDUCTION

The rate for any CONUS or OCONUS locality of travel for the incidental expenses only deduction is \$5 per day. See section 4.05 of Rev. Proc. 2019-48 (or successor).

SECTION 5. HIGH-LOW SUBSTANTIATION METHOD

1. *Annual high-low rates.* For purposes of the high-low substantiation

method, the *per diem* rates in lieu of the rates described in Notice 2024-68 (the *per diem* substantiation method) are \$319 for travel to any high-cost locality and \$225 for travel to any other locality within CONUS. The amount of the \$319 high rate and \$225 low rate that is treated as paid for meals for purposes of § 274(n) is \$86 for travel to any high-cost locality and \$74 for travel to any other locality within CONUS. See section 5.02 of Rev. Proc. 2019-48 (or successor). The *per diem* rates in lieu of the rates described in Notice 2024-68 (the meal and incidental expenses only substantiation method) are \$86 for travel to any high-cost locality and \$74 for travel to any other locality within CONUS.

2. *High-cost localities.* The following localities have a federal *per diem* rate of \$272 or more, and are high-cost localities for the specified portion of the calendar year:

Key City	County or Other Defined Location	Portion of Calendar Year
Alabama		
Gulf Shores	Baldwin	June 1 – July 31
Arizona		
Phoenix/Scottsdale	Maricopa	February 1 – March 31
Sedona	City limits of Sedona	October 1 – December 31 and March 1 – September 30
California		
Los Angeles	Los Angeles, Orange, and Ventura, and Edwards AFB, less the city of Santa Monica	October 1 – September 30
Mammoth Lakes	Mono	December 1 – March 31
Monterey	Monterey	October 1 – September 30
Napa	Napa	October 1 – November 30 and February 1 – September 30
Palm Springs	Riverside	October 1 – April 30
San Diego	San Diego	October 1 – September 30
San Francisco	San Francisco	October 1 – September 30
San Luis Obispo	San Luis Obispo	June 1 – July 31
Santa Barbara	Santa Barbara	October 1 – September 30
Santa Monica	City limits of Santa Monica	October 1 – September 30
South Lake Tahoe	El Dorado	December 1 – March 31
Sunnyvale/Palo Alto/San Jose	Santa Clara	October 1 – September 30
Yosemite National Park	Mariposa	January 1 – April 30

Key City	County or Other Defined Location	Portion of Calendar Year
Colorado		
Aspen	Pitkin	October 1 – September 30
Denver/Aurora	Denver, Adams, Arapahoe, and Jefferson	October 1 – October 31 and April 1 – September 30
Silverthorne/Breckenridge	Summit	December 1 – March 31
Steamboat Springs	Routt	December 1 – March 31
Telluride	San Miguel	October 1 – September 30
Vail	Eagle	October 1 – September 30
Delaware		
Lewes	Sussex	June 1 – August 31
District of Columbia		
Washington, D.C. (also the cities of Alexandria, Falls Church, and Fairfax, and the counties of Arlington and Fairfax, in Virginia; and the counties of Montgomery and Prince George's in Maryland) (See also Maryland and Virginia)		October 1 – September 30
Florida		
Boca Raton/Delray Beach/Jupiter	Palm Beach and Hendry	January 1 – April 30
Bradenton	Manatee	February 1 – March 31
Cocoa Beach	Brevard	February 1 – March 31
Fort Lauderdale	Broward	January 1 – April 30
Fort Myers	Lee	January 1 – March 31
Fort Walton Beach/DeFuniak Springs	Okaloosa and Walton	June 1 – July 31
Gulf Breeze	Santa Rosa	June 1 – July 31
Key West	Monroe	October 1 – September 30
Miami	Miami-Dade	December 1 – May 31
Naples	Collier	December 1 – April 30
Panama City	Bay	June 1 – July 31
Sarasota	Sarasota	February 1 – April 30
Sebring	Highlands	February 1 – March 31
Stuart	Martin	February 1 – March 31
Tampa/St. Petersburg	Pinellas and Hillsborough	February 1 – April 30
Vero Beach	Indian River	December 1 – April 30
Georgia		
Atlanta	Fulton and DeKalb	January 1 – March 31
Jekyll Island/Brunswick	Glynn	March 1 – July 31
Idaho		
Boise	Ada	October 1 – October 31 and June 1 – September 30
Coeur d'Alene	Kootenai	June 1 – August 31
Sun Valley/Ketchum	Blaine and Elmore	December 31 – March 31 and June 1 – September 30
Illinois		
Chicago	Cook and Lake	October 1 – November 30 and April 1 – September 30

Key City	County or Other Defined Location	Portion of Calendar Year
Maine		
Bar Harbor/Rockport	Hancock and Knox	October 1 – October 31 and May 1 – September 30
Kennebunk/Kittery/Sanford	York	July 1 – August 31
Portland	Cumberland and Sagadahoc	October 1 – October 31 and June 1 – September 30
Maryland		
Ocean City	Worcester	June 1 – August 31
Washington, D.C. Metropolitan Area	Montgomery and Prince George's	October 1 – September 30
Massachusetts		
Boston/Cambridge	Suffolk and city of Cambridge	October 1 – September 30
Falmouth	City limits of Falmouth	July 1 – August 31
Hyannis	Barnstable less the city of Falmouth	July 1 – August 31
Martha's Vineyard	Dukes	October 1 – September 30
Nantucket	Nantucket	June 1 – September 30
Michigan		
Mackinac Island	Mackinac	July 1 – August 31
Petoskey	Emmet	June 1 – August 31
Traverse City	Grand Traverse	July 1 – August 31
Minnesota		
Duluth	St. Louis	October 1 – October 31 and June 1 – September 30
Montana		
Big Sky/West Yellowstone/ Gardiner	Gallatin and Park	June 1 – September 30
Kalispell/Whitefish	Flathead	July 1 – September 30
New Jersey		
Toms River	Ocean	July 1 – August 31
New York		
Glens Falls	Warren	July 1 – August 31
Lake Placid	Essex	July 1 – August 31
New York City	Bronx, Kings, New York, Queens, and Richmond	October 1 – December 31 and March 1 – September 30
Saratoga Springs/ Schenectady	Saratoga and Schenectady	July 1 – August 31
North Carolina		
Kill Devil Hills	Dare	June 1 – August 31
Oregon		
Bend	Deschutes	June 1 – August 31
Eugene/Florence	Lane	June 1 – July 31
Seaside	Clatsop	July 1 – August 31
Pennsylvania		
Hershey	Hershey	June 1 – August 31
Philadelphia	Philadelphia	October 1 – November 30 and April 1 – September 30
Rhode Island		
Jamestown/Middletown/ Newport	Newport	October 1 – October 31 and June 1 – September 30

Key City	County or Other Defined Location	Portion of Calendar Year
South Carolina		
Charleston	Charleston, Berkeley, and Dorchester	October 1 – September 30
Hilton Head	Beaufort	March 1 – August 31
Tennessee		
Nashville	Davidson	October 1 – September 30
Utah		
Moab	Grand	October 1 – October 31, March 1 – June 30, and September 1 – September 30
Park City	Summit	October 1 – September 30
Vermont		
Burlington	Chittenden	October 1 – October 31 and May 1 – September 30
Manchester	Bennington	October 1 – October 31 and August 1 – September 30
Montpelier	Washington	October 1 – October 31 and August 1 – September 30
Virginia		
Virginia Beach	City of Virginia Beach	June 1 – August 31
Wallops Island	Accomack	July 1 – August 31
Washington, D.C. Metropolitan Area	Cities of Alexandria, Falls Church, and Fairfax; counties of Arlington and Fairfax	October 1 – September 30
Washington		
Port Angeles/Port Townsend	Clallam and Jefferson	July 1 – August 31
Seattle	King	October 1 – September 30
Wyoming		
Jackson/Pinedale	Teton and Sublette	October 1 – September 30

3. *Changes in high-cost localities.* There are no changes in the list of high-cost localities in this notice from the list of high-cost localities in section 5 of Notice 2024-68.

SECTION 6. EFFECTIVE DATE

This notice is effective for *per diem* allowances for lodging, meal and incidental expenses, or for meal and incidental expenses only, that are paid to any employee on or after October 1, 2025, for travel away from home on or after October

1, 2025. For purposes of computing the amount allowable as a deduction for travel away from home, this notice is effective for meal and incidental expenses or for incidental expenses only paid or incurred on or after October 1, 2025. *See* sections 4.06 and 5.04 of Rev. Proc. 2019-48 (or successor) for transition rules for the last 3 months of calendar year 2025.

SECTION 7. EFFECT ON OTHER DOCUMENTS

Notice 2024-68 is superseded.

DRAFTING INFORMATION

The principal author of this notice is C. Dylan Durham of the Office of Associate Chief Counsel (Income Tax & Accounting). For further information regarding this notice, contact Mr. Durham at 202-317-7005 (not a toll-free number).

Definition of Terms

Revenue rulings and revenue procedures (hereinafter referred to as "rulings") that have an effect on previous rulings use the following defined terms to describe the effect:

Amplified describes a situation where no change is being made in a prior published position, but the prior position is being extended to apply to a variation of the fact situation set forth therein. Thus, if an earlier ruling held that a principle applied to A, and the new ruling holds that the same principle also applies to B, the earlier ruling is amplified. (Compare with *modified*, below).

Clarified is used in those instances where the language in a prior ruling is being made clear because the language has caused, or may cause, some confusion. It is not used where a position in a prior ruling is being changed.

Distinguished describes a situation where a ruling mentions a previously published ruling and points out an essential difference between them.

Modified is used where the substance of a previously published position is being changed. Thus, if a prior ruling held that a principle applied to A but not to B, and the

new ruling holds that it applies to both A and B, the prior ruling is modified because it corrects a published position. (Compare with *amplified* and *clarified*, above).

Obsoleted describes a previously published ruling that is not considered determinative with respect to future transactions. This term is most commonly used in a ruling that lists previously published rulings that are obsoleted because of changes in laws or regulations. A ruling may also be obsoleted because the substance has been included in regulations subsequently adopted.

Revoked describes situations where the position in the previously published ruling is not correct and the correct position is being stated in a new ruling.

Superseded describes a situation where the new ruling does nothing more than restate the substance and situation of a previously published ruling (or rulings). Thus, the term is used to republish under the 1986 Code and regulations the same position published under the 1939 Code and regulations. The term is also used when it is desired to republish in a single ruling a series of situations, names, etc., that were previously published over a period of time in separate rulings. If the

new ruling does more than restate the substance of a prior ruling, a combination of terms is used. For example, *modified* and *superseded* describes a situation where the substance of a previously published ruling is being changed in part and is continued without change in part and it is desired to restate the valid portion of the previously published ruling in a new ruling that is self contained. In this case, the previously published ruling is first modified and then, as modified, is superseded.

Supplemented is used in situations in which a list, such as a list of the names of countries, is published in a ruling and that list is expanded by adding further names in subsequent rulings. After the original ruling has been supplemented several times, a new ruling may be published that includes the list in the original ruling and the additions, and supersedes all prior rulings in the series.

Suspended is used in rare situations to show that the previous published rulings will not be applied pending some future action such as the issuance of new or amended regulations, the outcome of cases in litigation, or the outcome of a Service study.

Abbreviations

The following abbreviations in current use and formerly used will appear in material published in the Bulletin.

A—Individual.
Acq.—Acquiescence.
B—Individual.
BE—Beneficiary.
BK—Bank.
B.T.A.—Board of Tax Appeals.
C—Individual.
C.B.—Cumulative Bulletin.
CFR—Code of Federal Regulations.
CI—City.
COOP—Cooperative.
Ct.D.—Court Decision.
CY—County.
D—Decedent.
DC—Dummy Corporation.
DE—Donee.
Del. Order—Delegation Order.
DISC—Domestic International Sales Corporation.
DR—Donor.
E—Estate.
EE—Employee.
E.O.—Executive Order.
ER—Employer.

ERISA—Employee Retirement Income Security Act.
EX—Executor.
F—Fiduciary.
FC—Foreign Country.
FICA—Federal Insurance Contributions Act.
FISC—Foreign International Sales Company.
FPH—Foreign Personal Holding Company.
FR—Federal Register.
FUTA—Federal Unemployment Tax Act.
FX—Foreign corporation.
G.C.M.—Chief Counsel's Memorandum.
GE—Grantee.
GP—General Partner.
GR—Grantor.
IC—Insurance Company.
I.R.B.—Internal Revenue Bulletin.
LE—Lessee.
LP—Limited Partner.
LR—Lessor.
M—Minor.
Nonacq.—Nonacquiescence.
O—Organization.
P—Parent Corporation.
PHC—Personal Holding Company.
PO—Possession of the U.S.
PR—Partner.
PRS—Partnership.

PTE—Prohibited Transaction Exemption.
Pub. L.—Public Law.
REIT—Real Estate Investment Trust.
Rev. Proc.—Revenue Procedure.
Rev. Rul.—Revenue Ruling.
S—Subsidiary.
S.P.R.—Statement of Procedural Rules.
Stat.—Statutes at Large.
T—Target Corporation.
T.C.—Tax Court.
T.D.—Treasury Decision.
TFE—Transferee.
TFR—Transferor.
T.I.R.—Technical Information Release.
TP—Taxpayer.
TR—Trust.
TT—Trustee.
U.S.C.—United States Code.
X—Corporation.
Y—Corporation.
Z—Corporation.

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¹ A cumulative list of all revenue rulings, revenue procedures, Treasury decisions, etc., published in Internal Revenue Bulletins 2025–27 through 2025–52 is in Internal Revenue Bulletin 2025–52, dated December 22, 2025.

Finding List of Current Actions on Previously Published Items¹

Bulletin 2025–41

¹ A cumulative list of all revenue rulings, revenue procedures, Treasury decisions, etc., published in Internal Revenue Bulletins 2025–27 through 2025–52 is in Internal Revenue Bulletin 2025–52, dated December 22, 2025.

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INTERNAL REVENUE BULLETIN

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