Internal Revenue Service

Superfund Tax on Chemical Substances; Request to Modify List of Taxable Substances; Notice of Filing for Linear UnDecyl Phthalate

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice of filing and request for comments.

SUMMARY: This notice of filing announces that a petition has been filed requesting that linear undecyl phthalate be added to the list of taxable substances. This notice of filing also requests comments on the petition. This notice of filing is not a determination that the list of taxable substances is modified.

DATES: Written comments and requests for a public hearing must be received on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Commenters are encouraged to submit public comments or requests for a public hearing relating to this petition electronically via the Federal eRulemaking Portal at https://www.regulations.gov (indicate public docket number IRS-2025-0044 or linear undecyl phthalate) by following the online instructions for submitting comments. Comments cannot be edited or withdrawn once submitted to the Federal eRulemaking Portal. Alternatively, comments and requests for a public hearing may be mailed to: Internal Revenue Service, Attn: CC:PA:01:PR (Notice of Filing for Linear Undecyl Phthalate), Room 5203, P.O. Box 7604, Ben Franklin Station, Washington D.C. 20044. All comments received are part of the public record and subject to public disclosure. All comments received will be posted without change to https://www.regulations.gov/, including any personal information provided. You should submit only information that you wish to make publicly available. If a public hearing is scheduled, notice of the time and place for the hearing will be published in the Federal Register.

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

SUPPLEMENTARY INFORMATION:

Request to Add Substance to the List:

- (a) Overview. A petition was filed pursuant to Rev. Proc. 2022-26 (2022-29 I.R.B. 90), as modified by Rev. Proc. 2023-20 (2023-15 I.R.B. 636), requesting that linear undecyl phthalate be added to the list of taxable substances under section 4672(a) of the Internal Revenue Code (List). The petition requesting the addition of linear undecyl phthalate to the List is based on weight and contains the information detailed in paragraph (b) of this document. The information is provided for public notice and comment pursuant to section 9 of Rev. Proc. 2022-26. The publication of petition information in this notice of filing is not a determination and does not constitute Treasury Department or IRS confirmation of the accuracy of the information published.
 - (b) Petition Content.
 - (1) Substance name: Linear undecyl phthalate
 - (2) Petitioner: Exxon Mobil Corporation, an exporter of linear undecyl phthalate
 - (3) Proposed classification numbers:
 - (i) HTSUS number: 2917.33.00.50
 - (ii) Schedule B number: 2917.33.00.50
 - (iii) CAS number: 3648-20-2
 - (4) Petition filing dates:
 - (i) Petition filing date for purposes of making a determination: April 8, 2025
- (ii) Petition filing date for purposes of section 11.02 of Rev. Proc. 2022-26, as modified by section 3 of Rev. Proc. 2023-20: July 1, 2022
- (5) Description from petition: Linear undecyl phthalate is a plasticizer that is especially suited for applications such as films, vinyl coated fabrics, automotive,

construction (roofing membranes, flooring, and window and door seals), and electrical wire and cable.

Linear undecyl phthalate is made from ethylene and xylene. Taxable chemicals constitute 70.72 percent by weight of the materials used to produce this substance.

(6) Process identified in petition as predominant method of production of substance: The linear undecyl phthalate di-ester is made by reacting a mix of primary C11 alcohol with phthalic anhydride. The ester is produced by esterification of 2 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 $C_{30}H_{50}O_4$ 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.

- (7) Stoichiometric material consumption equation, based on process identified as predominant method of production:
- 10 C_2H_4 [ethylene] + 2 CO [carbon monoxide] + 4 H_2 [hydrogen] + C_8H_{10} [orthoxylene] + 3 O_2 [oxygen] $\rightarrow C_{30}H_{50}O_4$ [linear undecyl phthalate] + 4 H_2O [water]
- (8) Tax rate calculated by Petitioner, based on Petitioner's conversion factors for taxable chemicals used in production of substance:
 - (i) *Tax rate*: \$7.89 per ton
 - (ii) Conversion factors: 0.59 for ethylene, 0.22 for xylene
 - (9) Public docket number: IRS-2025-0044

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