

Call for Evidence: restricting the use of certain non-polymeric Aromatic Brominated Flame Retardants

Fields marked with * are mandatory.

Restricting the use of certain non-polymeric aromatic brominated flame retardants

Welcome to this Call for Evidence!

The European Commission has recently given ECHA a [mandate](#) to prepare a restriction on certain non-polymeric aromatic brominated flame retardants.

The purpose of this survey is to gather information on the expected impacts of three restriction options, which are being assessed by ECHA as part of the preparation of this restriction dossier.

Aromatic brominated flame retardants are a group of chemical substances that contain bromine atoms covalently bound to aromatic ring structures that are used to reduce the flammability of materials.

They can be divided into two main groups, depending on how they are incorporated into the material: **additive** aromatic brominated flame retardants are not chemically bound to the polymeric material, while **reactive** aromatic brominated flame retardants are chemically bound to the polymeric material. Additive aromatic brominated flame retardants can also be divided into:

- Polymeric aromatic brominated flame retardants, which meet the polymer definition under REACH, i.e. at least 50% of their weight consists of molecules with a sequence of three or more covalently bound monomer units.
- Non-polymeric aromatic brominated flame retardants that do not meet the polymer definition under REACH.

For the purposes of preparing the restriction dossier, ECHA is considering three different Restriction Options. All of these options target **non-polymeric aromatic brominate flame retardants**:

1. Under **restriction option 1**, a total of 5 substances (details will follow below) are considered to be restricted. The three substances that are identified as SVHCs (and substances containing these). We refer to these 5 substances as **Group A**.
2. Under **restriction option 2**, a total of 24 substances (details will follow below) are considered to be restricted. This group include the above 5 (**Group A**) and additional 19 substances (**Group B**) that were identified in the investigation report on aromatic brominated flame retardants as non-polymeric additives that have potential PBT or vPvB hazard based on QSAR predictions and environmental concentrations.
3. Under **restriction option 3**, the 5 substances belonging to **Group A** are considered to be restricted. In addition, any substance belonging to **Group B** that receives a harmonised PBT or vPvB classification according to the CLP Regulation No 1272/2008 will automatically be restricted, too. When responding about Restriction Option 3, please assume that there is a high chance that some (or all) substances belonging to Group B will be classified within the next 10 years.

Summary of the Restriction Options

Group A (5 substances):

- EC No. (284-366-9); CAS No. (84852-53-9); 1,1'-(ethane-1,2-diyl)bis[pentabromobenzene]; DBDPE
- EC No. (700-158-7); CAS No. (1092834-40-6); Brominated 1,1'-ethane-1,2-diylbisbenzene; DBDPE and lower brominated analogues
- EC No. (247-426-5); CAS No. (26040-51-7); TBPH;
- EC No. (428-050-2); reaction mass of: 2-ethylhexyl 2,3,4,5-tetrabromobenzoate bis(2-ethylhexyl) 3,4,5,6-tetrabromophthalate; Reaction mass of TBPH and EHTBB
- EC No. (253-692-3); CAS No. (37853-59-1); 1,1'-[ethane-1,2-diylbisoxo]bis[2,4,6-tribromobenzene] ; BTBPE

Group B (19 substances):

- EC No. (701-414-0); CAS No. (56720-20-8); dioctyl tetrabromophthalate;
- EC No. (701-415-6); CAS No. (109230-28-6); dihexyl tetrabromophthalate;
- EC No. (201-236-9); CAS No. (79-94-7); 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol ; TBBPA
- EC No. (244-617-5); CAS No. (21850-44-2); 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol; TBBPA-BDDP
- EC No. (253-693-9); CAS No. (37853-61-5); 4,4'-(isopropylidene)bis[2,6-dibromoanisole]; TBBPA-BME
- EC No. (306-832-3); CAS No. (97416-84-7); 1,1'-(isopropylidene)bis[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)benzene]; TBBPA-BDBPE
- EC No. (400-440-7); INTERSTAB FR 184
- EC No. (944-461-4); Reaction mass of 1,1'-(isopropylidene)bis[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)benzene] and 1,3-dibromo-2-(2,3-dibromo-2-methylpropoxy)-5-[2-[3,5-dibromo-4-(2,3,3-tribromo-2-methylpropoxy)phenyl]propan-2-yl]benzene; Reaction mass of TBBPA-DBDPE and another similar
- EC No. (603-094-7); CAS No. (125904-11-2); Benzene, ethenyl-, ar-bromo derivs.;
- EC No. (201-773-9); CAS No. (87-82-1); Hexabromobenzene ; HBB
- EC No. (201-593-0); CAS No. (85-22-3); 2,3,4,5,6-pentabromoethylbenzene ; PBEB
- EC No. (201-774-4); CAS No. (87-83-2); 2,3,4,5,6-pentabromotoluene ; PBT
- EC No. (245-688-5); CAS No. (23488-38-2); 2,3,5,6-tetrabromo-p-xylene ; TBX
- EC No. (621-703-4); CAS No. (608-90-2); 1,2,3,4,5-pentabromobenzene; PBBz
- EC No. (251-118-6); CAS No. (32588-76-4); N,N'-ethylenebis(3,4,5,6-tetrabromophthalimide) ; EBTBP

- EC No. (402-550-0); Perbromo-N,N'-bipthalimide ; ADINE BBH 44
- EC No. (814-310-6); CAS No. (183658-27-7); Benzoic acid, 2,3,4,5-tetrabromo-, 2-ethylhexyl ester ; EHTBB
- EC No. (261-526-6); CAS No. (58965-66-5); Tetradecabromo-1,4-diphenoxybenzene; TBDBP
- EC No. (605-018-8); CAS No. (155613-93-7); 1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-, octabromo deriv. ; OBIND / OBTMPI

	Substances in Group A	Substances in Group B
Restriction Option 1	Restricted	Not Restricted
Restriction Option 2	Restricted	Restricted
Restriction Option 3	Restricted	Restricted only if in the future they meet the harmonised classification as PBT or vPvB (according to the CLP Regulation)

While at this stage, only 5 substances are listed in the restriction mandate, this survey aims to gather information on the socio-economic impacts also of restriction option 2 and 3 (with a broader scope in terms of restricted substances), as this information will be relevant should the Commission decide to amend the mandate on the basis of two interim reports mentioned in the mandate.

The restriction options foresee a ban on the placing on the market of **electrical and electronic equipment, construction products**, and **textile products** containing the substances in scope in **concentrations above 0.1% by weight**.

Placing on the market means making a product available on the Union market for the first time, with a view to its distribution or use within the Union, whether for reward or free of charge and irrespective of the selling technique.

The three restriction options **do not restrict** the placing on the market of substances or mixtures, with the exception of mixtures meeting the definition of construction products.

The restriction options are further described once the survey is initiated. Please consult the background document for details on the regulatory context of this call for evidence.

Before you start the survey, please take a moment to read carefully through the points below as they contain important information.

- First, let us emphasise how crucial it is that you provide information that is as realistic and accurate as possible. Presenting a clear picture is in your best interest as it avoids later discussions about the plausibility of the responses received.
- When responding to this survey, make sure you only include NON-CONFIDENTIAL information. You will have the possibility to complement your submission with confidential information using a specific webform link that will be available once the survey is completed.

- Mandatory questions are marked by an asterisk (*). However, we encourage you to answer all survey questions so that ECHA can comprehensively assess the impact of the considered restriction options.

This Call for Evidence will be open from 21 January 2026 to 18 March 2026 (until 23:59 Helsinki time).

Should you have any questions, please contact: flame-retardants@echa.europa.eu.

Thank you for taking the time to respond.

Participant Information

*** Please indicate your company/organisation name.**

FEAD - European Waste Management Association

Please indicate your name and your contact details.

Name

Rafael Basciano

*** Email**

rafael.basciano@fead.be

Phone Number

*** Do you agree to be contacted by ECHA also on future calls for comments and evidence of a similar nature and for your contact details to be stored for that purpose?**

Any personal data submitted is subject to [ECHA's data privacy rules](#).

- ☒ **Yes**
☐ No

*** What type of actor are you?** Please select the option that best describes you.

The European Economic Area (EEA) comprises the 27 EU Member States as well as Norway, Iceland, and Liechtenstein.

- ☐ **An EEA based company using non-polymeric aromatic brominated flame retardants in an industrial or professional activity (downstream user)**
☒ **An EEA based industry association**
☐

An EEA/non-EEA based manufacturer of flame retardants or an EEA based importer of non-polymeric aromatic brominated flame retardants

- ☐ An EEA based importer of mixtures and/or articles containing non-polymeric aromatic brominated flame retardants
- ☐ An actor based in a non-EEA country exporting to the EEA mixtures and/or articles containing non-polymeric aromatic brominated flame retardants
- ☐ A Non-Governmental Organization (NGO)
- ☐ Other actors (e.g. academic institutions, citizens, etc.)

Provide here additional information about you and your activity.

Please describe the sector that you represent.

Waste management sector

Please provide an approximate estimate of the total combined annual turnover in millions of euros (sum of all members' turnovers)

Provide here any additional information to complement your response.

How much of the EEA (European Economic Area) production (in %) do you represent? (Please, report only a figure in the boxes below).

	(In %)	
Lower Bound	<input type="text"/>	%
Upper Bound	<input type="text"/>	%

If needed, include here any additional information

Where are your production facilities located?

Select the country or countries from the list (e.g. if you operate in different countries select all that apply).

- ☒ AT - Austria
- ☒ BE - Belgium
- ☒ BG - Bulgaria
- ☐ CY - Cyprus
- ☒ CZ - Czechia

- ☒ DE - Germany
- ☒ DK - Denmark
- ☒ EE - Estonia
- ☒ EL - Greece
- ☒ ES - Spain
- ☒ FI - Finland
- ☒ FR - France
- ☐ HR - Croatia
- ☐ HU - Hungary
- ☒ IE - Ireland
- ☐ IS - Iceland
- ☒ IT - Italy
- ☐ LI - Liechtenstein
- ☒ LT - Lithuania
- ☒ LU - Luxembourg
- ☐ LV - Latvia
- ☒ MT - Malta
- ☒ NL - Netherlands
- ☒ NO - Norway
- ☒ PL - Poland
- ☒ PT - Portugal
- ☒ RO - Romania
- ☒ SE - Sweden
- ☐ SI - Slovenia
- ☐ SK - Slovakia

ABFRs used & tonnage

If you are a company, the responses to this survey will be considered to represent your company's situation. If you are responding on behalf of an industry sector, please indicate in the space below what share of the EEA production your responses are representative of.

Also use the space below to provide any additional information we should consider regarding the representativeness of your responses.

In the questions of this survey, the word “**organisation**” should be understood as:

- **your company**, if you are responding on behalf of a company, or the members of your association,
- **the members of your association**, if you are responding as an industry or trade

Consider the following group of aromatic brominated flame retardants (ABFRs).

Group A (5 substances):

- EC No. (284-366-9); CAS No. (84852-53-9); 1,1'-(ethane-1,2-diyl)bis[pentabromobenzene]; DBDPE
- EC No. (700-158-7); CAS No. (1092834-40-6); Brominated 1,1'-ethane-1,2-diylbisbenzene; DBDPE and lower brominated analogues
- EC No. (247-426-5); CAS No. (26040-51-7); TBPH;
- EC No. (428-050-2); reaction mass of: 2-ethylhexyl 2,3,4,5-tetrabromobenzoate bis(2-ethylhexyl) 3,4,5,6-tetrabromophthalate; Reaction mass of TBPH and EHTBB
- EC No. (253-692-3); CAS No. (37853-59-1); 1,1'-[ethane-1,2-diylbisoxo]bis[2,4,6-tribromobenzene] ; BTBPE

Group B (19 substances):

- EC No. (701-414-0); CAS No. (56720-20-8); dioctyl tetrabromophthalate;
- EC No. (701-415-6); CAS No. (109230-28-6); dihexyl tetrabromophthalate;
- EC No. (201-236-9); CAS No. (79-94-7); 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol ; TBBPA
- EC No. (244-617-5); CAS No. (21850-44-2); 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol; TBBPA-BDDP
- EC No. (253-693-9); CAS No. (37853-61-5); 4,4'-(isopropylidene)bis[2,6-dibromoanisole]; TBBPA-BME
- EC No. (306-832-3); CAS No. (97416-84-7); 1,1'-(isopropylidene)bis[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)benzene]; TBBPA-BDBPE
- EC No. (400-440-7); INTERSTAB FR 184
- EC No. (944-461-4); Reaction mass of 1,1'-(isopropylidene)bis[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)benzene] and 1,3-dibromo-2-(2,3-dibromo-2-methylpropoxy)-5-{2-[3,5-dibromo-4-(2,3,3-tribromo-2-methylpropoxy)phenyl]propan-2-yl}benzene; Reaction mass of TBBPA-DBDPE and another similar
- EC No. (603-094-7); CAS No. (125904-11-2); Benzene, ethenyl-, ar-bromo derivs.;
- EC No. (201-773-9); CAS No. (87-82-1); Hexabromobenzene ; HBB
- EC No. (201-593-0); CAS No. (85-22-3); 2,3,4,5,6-pentabromoethylbenzene ; PBEB
- EC No. (201-774-4); CAS No. (87-83-2); 2,3,4,5,6-pentabromotoluene ; PBT
- EC No. (245-688-5); CAS No. (23488-38-2); 2,3,5,6-tetrabromo-p-xylene ; TBX
- EC No. (621-703-4); CAS No. (608-90-2); 1,2,3,4,5-pentabromobenzene; PBBz
- EC No. (251-118-6); CAS No. (32588-76-4); N,N'-ethylenebis(3,4,5,6-tetrabromophthalimide) ; EBTBP
- EC No. (402-550-0); Perbromo-N,N'-bipthalimide ; ADINE BBH 44
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- EC No. (261-526-6); CAS No. (58965-66-5); Tetradecabromo-1,4-diphenoxybenzene; TBDBP
- EC No. (605-018-8); CAS No. (155613-93-7); 1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-, octabromo deriv. ; OBIND / OBTMPI

* Does your organisation use any of the non-polymeric aromatic brominated flame retardants in Group A or Group B in an industrial or professional activity (multiple options are possible)? **Remember that if you are not a company but an association, the question refers to the companies you represent.**

- ☐ Yes, just from Group A
- ☐ Yes, just from Group B
- ☐ Yes, from Group A and Group B
- ☒ None of the above

* In your answer you indicated that you do not use any of the listed ABFRs or do not perform any of the activities listed. If you still wish to submit a comment to this call for evidence, please indicate it here:

- ☒ Yes, I would like to submit a comment to this call for evidence.
- ☐ No, I wish to finalise my response to this call for evidence here.

Call for Evidence Aromatic Brominated Flame Retardants

This part of the survey addresses any stakeholder that, while not using directly aromatic brominated flame retardants in the products in the scope of the restriction, wishes to contribute to this call for evidence (e.g. importers, non-governmental organisations, academic institutes, citizens, suppliers of flame retardants, etc.).

ECHA is considering three different options. All of these options target non-polymeric aromatic brominate flame retardants (ABFRs):

1. Under **restriction option 1**, a total of 5 substances (details will follow below) are considered to be restricted. The three substances that are identified as SVHCs (and substances containing these). We refer to these 5 substances as **Group A**.
2. Under **restriction option 2**, a total of 24 substances (details will follow below) are considered to be restricted. This group include the above 5 (**Group A**) and additional 19 substances (**Group B**) that were identified in the investigation report on aromatic brominated flame retardants as non-polymeric additives that have potential PBT or vPvB hazard based on QSAR predictions and environmental concentrations.
3. Under **restriction option 3**, the 5 substances belonging to **Group A** are considered to be restricted. In addition, any substance belonging to **Group B** that receives a harmonised PBT or vPvB classification according to the CLP Regulation No 1272/2008 will automatically be restricted, too. When responding about Restriction Option 3, please assume that there is a high chance that some (or all) substances belonging to Group B will be classified within the next 10 years.

Summary of the Restriction Options

	Substances in Group A	Substances in Group B
Restriction Option 1	Restricted	Not Restricted
Restriction		

Option 2	Restricted	Restricted
Restriction Option 3	Restricted	Restricted only if in the future they meet the harmonised classification as PBT or vPvB (according to the CLP Regulation)

Group A (5 substances):

- DBDPE ; 1,1'-(ethane-1,2-diyl)bis[pentabromobenzene]
- DBDPE and lower brominated analogues; Brominated 1,1'-ethane-1,2-diylbisbenzene
- TBPH; Bis(2-ethylhexyl) tetrabromophthalate
- Reaction mass of TBPH and EHTBB; reaction mass of: 2-ethylhexyl 2,3,4,5-tetrabromobenzoate bis(2-ethylhexyl) 3,4,5,6-tetrabromophthalate
- BTBPE; 1,1'-[ethane-1,2-diylbisoxo]bis[2,4,6-tribromobenzene]

Group B (19 substances):

- dioctyl tetrabromophthalate
- dihexyl tetrabromophthalate
- TBBPA; 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol
- TBBPA-BDDP; 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol
- TBBPA-BME; 4,4'-(isopropylidene)bis[2,6-dibromoanisole]
- TBBPA-BDBPE; 1,1'-(isopropylidene)bis[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)benzene]
- INTERSTAB FR 184; [Not publicly available]
- Reaction mass of TBBPA-DBDPE and another similar; Reaction mass of 1,1'-(isopropylidene)bis[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)benzene] and 1,3-dibromo-2-(2,3-dibromo-2-methylpropoxy)-5-{2-[3,5-dibromo-4-(2,3,3-tribromo-2-methylpropoxy)phenyl]propan-2-yl}benzene
- Benzene, ethenyl-, ar-bromo derivs.
- HBB; Hexabromobenzene
- PBEB; 2,3,4,5,6-pentabromoethylbenzene
- PBT; 2,3,4,5,6-pentabromotoluene
- TBX; 2,3,5,6-tetrabromo-p-xylene
- PBBz; 1,2,3,4,5-pentabromobenzene
- EBTBP; N,N'-ethylenebis(3,4,5,6-tetrabromophthalimide)
- ADINE BBH 44; Perbromo-N,N'-bipthalimide
- EHTBB; Benzoic acid, 2,3,4,5-tetrabromo-, 2-ethylhexyl ester
- TBDBP; Tetradecabromo-1,4-diphenoxybenzene
- OBIND / OBTMPI; 1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3-phenyl-, octabromo deriv.

The restriction options foresee a ban on the placing on the market of **electrical and electronic equipment, construction products**, and **textile products** containing the substances in scope in concentrations above 0.1% by weight. The restriction is assumed to enter into force in 2030 with a transition period of 18 months.

The three restriction options do not restrict the placing on the market of substances or mixtures, with the exception of mixtures meeting the definition of construction products.

When providing your response to this survey, please consider also the following definitions of the above three product categories.

Electrical and Electronic Equipment (EEE) are defined in the RoHS directive (EUR-Lex - 02011L0065-20200301 - EN - EUR-Lex) as equipment which is dependent on electric currents or electromagnetic fields in order to work properly and equipment for the generation, transfer and measurement of such currents and fields and designed for use with a voltage rating not exceeding 1 000 volts for alternating current and 1 500 volts for direct current. The EEE categories are listed in Annex I of the RoHS Directive.

Construction products are defined in the Construction Products Regulation (Regulation - EU - 2024/3110 - EN - EUR-Lex) as any formed or formless physical item, including 3D-printed products, or a kit that is placed on the market, including by means of supply to the construction site, for incorporation in a permanent manner into construction works or parts thereof with the exception of items that need first to be integrated into a kit or another construction product prior to being incorporated in a permanent manner into construction works. The product families are listed in Annex VII of the Construction Products Regulation.

Textile products are defined in Textile Fibres Regulation (EUR-Lex - 02011R1007-20180215 - EN - EUR-Lex) as any raw, semi-worked, worked, semi-manufactured, manufactured, semi-made-up or made-up product which is exclusively composed of textile fibres, regardless of the mixing or assembly process employed. In addition, the following products shall be treated in the same way as textile products:

- (a) products containing at least 80 % by weight of textile fibres;
- (b) furniture, umbrella and sunshade coverings containing at least 80 % by weight of textile components;
- (c) the textile components of:
 - (i) the upper layer of multi-layer floor coverings;
 - (ii) mattress coverings;
 - (iii) coverings of camping goods;

provided such textile components constitute at least 80 % by weight of such upper layers or coverings;

- (d) textiles incorporated in other products and forming an integral part thereof, where their composition is specified”.

Hazard: include here any information you/your organisation has on hazards of non-polymeric ABFRs

Emissions: Please provide any information you/your organisation has on emissions of ABFR to the environment.

Volumes: Please provide any information or estimates you/your organisation has on the volumes ABFR used in the EEA (European Economic Area) market.

(e.g. total volumes, key sectors with highest use, trends over time, imports vs EEA production, etc.)

* **Alternatives**

Please provide any information your organisation has on alternatives to the aromatic brominated flame retardants listed in Group A or Group B (e.g. types of alternatives used, their technical and economic feasibility, safety considerations, barriers to substitution, etc.)

With alternatives we mean any alternative flame retardant to the aromatic brominated flame retardants listed below. When relevant discuss inherently flame retardant/non-combustible materials.

For which types of products would you like to provide information on alternatives? (multiple responses possible)

- ☐ Electrical and electronic equipment
- ☐ Textile products
- ☐ Construction Products
- ☐ I do not want to provide information on alternatives

Benefits of restricting: in your view, what would be the main societal benefits of restricting non-polymeric aromatic brominated flame retardants in the above three product categories?

When responding, indicate whether the response refers in general to all three restriction options or to one or more options in particular.

Negative impacts of restricting: do you foresee any potential negative impacts on the society of restricting aromatic brominated flame retardants (e.g. on products quality and safety)? When responding, indicate whether the response refers in general to all three restriction options or to one or more options in particular

Submit your responses

If you would like to complement your response to this survey by submitting an attachment (confidential or non-confidential), please use the webform ([link](#)) available at [ECHA Website](#).

When filling in the webform, make sure to use the same contact information as provided in response to this survey and include the content of the question you are responding to.

Thank you for your contribution!

(Click in the submit button)

Contact

[Contact Form](#)