

National Guidance Document

on the classification of plastic waste in the context of transboundary shipment as of 1 January 2021

This guidance lays down the national requirements for shipment of plastic waste from and to Austria as from 1 January 2021.

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1 Introduction

This national interpretation provides information for

1. persons involved in shipments of plastic waste, such as notifiers, persons who manage shipments of waste in accordance with Article 18 of the Regulation (EC) No 1013/2006 on shipments of waste (EC-Waste Shipment Regulation (WSR)) waste producers, collectors, dealers, brokers, waste transporters, consignees, recovery facilities and laboratories; as well as
2. authorities responsible for the enforcement (including control) of the EC-Waste Shipment Regulation.

Prior to any shipment of plastic waste of the entry B3011 in Annex IX of the Basel Convention or Annex III of the EC-WSR, respectively, the person who arranges the shipment should clarify whether the intended shipment is in compliance with national legislation in the country of dispatch and destination (and, where applicable, in countries of transit). For example, some third countries introduced bans or restrictions on imports of plastic waste in their national legislation, which is to be respected in any case; limit values for impurities (non-hazardous contaminants) are also currently being set at different levels in the individual EU Member States or by the authorities responsible for transboundary shipments. Some EU Member States also introduced national import bans on waste destined for landfilling or energy recovery.

2 Entries for plastic waste

Decision BC-14/12 amended Annex IX to the Basel Convention and the entry for plastic waste B3010 was replaced by B3011 as of 1 January 2021.

In addition, a new entry A3210 was implemented in Annex VIII of the Basel Convention in order to classify plastic waste with hazardous properties. Furthermore, a new entry Y48 was added to Annex II of the Basel Convention (Annex II - List of wastes to be controlled). The full text of these entries, including the associated footnotes, can be found in the delegated regulation (EU) 2020/2174 of the commission of 19 October 2020 amending Annexes IC, III, IIIA, IV, V, VII and VIII to Regulation (EC) No 1013/2006 of the European Parliament and of the Council on shipments of waste.

The OECD entry for PVC waste GH013 is no longer applicable by EU Member States from 1 January 2021.

The Delegated Regulation implements these changes in the EC-WSR, whereby entries A3210, B3011 and Y48 apply to exports and imports from and into the Union. As an exception to this, entry AC300 applies to intra-EU shipments of hazardous plastic wastes and exports and imports of these wastes to and from OECD member countries¹ outside the EU instead of A3210. However, the wording of the entries A3210 and AC300 is so similar, that these two entries de facto cover the same wastes.

2.1 Import and export of plastic waste

Exports to non-OECD countries outside the EU

Exports of plastic waste classified under entries A3210 or Y48 to non-OECD countries which do not apply the OECD Decision C (2001) 107 final on the control of transboundary

¹ The current list of OECD countries can be found at the following website:
<http://www.oecd.org/about/members-and-partners/>

movements of waste destined for recovery operations are prohibited pursuant to Article 36 of the EC-WSR.

Exports of plastic waste classified under B3011 to countries to which the OECD Decision does not apply are subject to the provisions of Article 37 of the EC-WSR.

With regard to the legal situation, applicable as from 1 January 2021, it is noted that exports of plastic waste covered by entry B3011 to non-OECD countries (outside the EU) are to be regarded as subject to the notification procedure, unless and until an amendment of the EU Regulation No. 1418/2007 is available on the basis of actual feedback provided by these non-OECD countries specifying the control procedures applied by these countries (this may be column a) (prohibition), column b) (written notification and consent procedure) or column c) (no control in the country of destination); see Article 37 (2) of the EC-WSR).

Exports to OECD countries outside the EU

Exports of plastic waste to be classified under AC300 or Y48 to countries outside the EU to which the OECD Decision C (2001) 107 final (OECD-Decision) applies, are subject to prior notification and consent procedure pursuant to the EC-WSR.

Exports of plastic waste to be classified under B3011 to OECD-countries outside the EU, to which the OECD Decision applies, are only subject to the general information requirements (= Annex VII form and existence of a recovery contract pursuant to Article 18 of the EC-WSR) following Article 38.

Imports into the EU

Imports of plastic waste classified under A3210 or Y48 into the EU are subject to the procedure of prior notification and consent, whereas for plastic waste classified under B3011 only the general information requirements pursuant to Article 18 EC-WSR apply.

In case of imports of hazardous plastic waste from OECD-member countries into the EU, the entry AC300 shall be used instead of the entry A3210.

2.2 Shipments between EU Member States

For shipments of plastic waste within the Union, the Delegated Regulation introduced specific entries for plastic waste:

- **EU3011** for plastic waste to which the general information procedure pursuant to Art. 18 of the EC-WSR applies;
- **EU48** for non-hazardous plastic waste to which the procedure of prior notification and consent procedure pursuant to Article 4 of the EC-WSR applies;
- **AC300** for plastic waste to be classified as hazardous waste, which are subject to the prior notification and consent procedure pursuant to Art. 4 of the EC-WSR.

All plastic waste that, when shipped between EU Member States, is not classified as EU3011 or AC300 shall be assigned to entry EU48.

2.3 Shipments of mixtures of plastics pursuant to Annex IIIA between EU Member States

The Delegated Regulation amended Annex IIIA of the EC-WSR with respect to **recyclable or recoverable mixtures of plastic wastes** in order to include the following mixtures classified under separate indents or sub-indents of the entry EU3011, for the purpose of shipment between Member States:

- Mixtures of wastes classified under entry EU3011 and listed under "non-halogenated polymers";
- Mixtures of wastes classified under entry EU3011 and listed under "cured resin waste or condensation products";
- Mixtures of wastes classified under entry EU3011 and listed under "perfluoro-alkoxyalkanes" (exhaustive list of entries).

In this respect, the provisions of Article 28 of the EC-WSR are worth noting, according to which, in the event of different views of the competent authorities in the state of dispatch and destination regarding the classification of the plastic waste, always the stricter control regime takes precedence. Therefore, prior to the transboundary shipment the status of the waste has to be clarified in the in the country of dispatch and destination.

3 General notes

3.1 Entries B3011 and EU3011

All plastic wastes classifiable under B3011 or EU3011 have to be completely polymerised or cured (solid waste).

Note that C10-C13 alkanes (plasticisers), which are viscous liquids (and were listed under the previous, now invalid entry B3010) are not part of B3011 or EU3011.

The entries B3011 or EU3011 contain a non-exhaustive list of non-halogenated polymers and cured resins. Therefore, wastes that consist "almost exclusively" of another non-halogenated polymer or co-polymer or a cured resin/condensation product other than those listed by name in B3011 may also be classified under B3011 or EU3011.

- 1. Non-halogenated polymers:** These include (exemplary list) also the following non-halogenated polymers: acrylonitrile, butadiene, polyacetals, polyamides, polybutylene terephthalate, polyphenylene sulphides, acrylic polymers, polyurethane, polysiloxanes, polymethyl methacrylate, polyvinyl alcohol, polyvinyl butyral, polyvinyl acetate and others (such as polyether ether ketone (PEEK), polybutylene succinate (PBS), polyacetal or polyoxymethylene (POM), thermoplastic polyurethane (TPU)).
- 2. Cured resins/condensation products:** These include (exemplary list) also the following cured resins: silicone (polysiloxane), polyimides, aromatic polyamide resins, polyester resins and thermoset polyurethane polymers.
- 3. Fluorinated plastic waste:** The enumeration of plastic wastes consisting of fluorinated polymers is exhaustive and excludes plastic wastes after their use (no "post-consumer waste"). Therefore, fluorinated "post-consumer" plastic wastes and not specifically listed fluorinated polymers and copolymers do not fall under B3011 or EU3011, but under Y48 or EU48 or, if hazardous, under A3210 or AC300.

Polyvinyl chloride (PVC) is only listed as an individual entry under EU3011 but not included in entry B3011. Therefore, only when it comes to intra-EU shipments, PVC-wastes are considered to be "green listed", provided:

- they do not exhibit hazardous properties (e.g. due to the presence of cadmium, lead (stabilisers) or hazardous phthalates in the case of flexible PVC);
- they are almost free from contamination or other types of waste;
- they are destined for admissible recovery, including recycling.

Other chlorinated polymers, such as polyvinylidene chloride, chlorinated polyethylene (PE-C or CPE) are excluded from the scope of EU3011 (or B3011), therefore they are always subject to a notification and consent procedure for transboundary shipment.

Note

Plastic waste containing persistent organic pollutants (POPs) in concentrations above the the POP limit value, is always subject to a notification and consent procedure.

Halogen-free polymer blends under B3011 or EU3011

Polymer blends are deliberately produced mixtures of different polymers on a molecular basis. From the Austrian point of view halogen-free polymer blends are not considered to be mixtures, but defined plastic waste and therefore covered by the entry B3011 or EU3011 – first indent (e.g. ABS/PC polymer blend).

Thermosetting polymers (also called thermosets, "duromers") are plastics, which, after curing, can no longer be deformed by heat or other measures after they have hardened. Therefore, in this case, the use of ground thermosets as fillers in the plastics industry is considered a recycling operation R3.

3.2 Entries Y48 and EU48

The following are examples of plastic waste covered by the entries Y48 or EU48:

- Wastes from certain composite materials not mentioned in other entries, containing plastics such as wood-plastic composite wastes containing fine wood flour or fibres
- Plastic casings from waste electric and electronic equipment (WEEE) containing brominated flame retardants in quantities exceeding the limits of Annex IV of EU-POP

Regulation 2019/1021, such as plastics from monitors, TV sets, printers, photocopiers, dashboards or from vehicles

- Cable stripping residues/plastic waste from cables containing more than 0.1 % by mass of banned flame retardants (POPs) or other banned/restricted substances (e.g. phthalates) or which are a mixture of plastics with PVC (beyond the permissible contamination)
- Fibre-reinforced plastic waste such as carbon fibre or glass fibre reinforced plastics
- Non-halogenated plastic waste mixed with halogenated plastic waste (e.g. fluorinated plastic waste or PVC) or with resins
- Plastic waste that has been partially charred or burned (PAH contamination must be below the limit value for classification as hazardous waste) or those that are contaminated by extinguishing agents but do not constitute hazardous waste
- Plastic containers with residual contents (residual contents count as contaminants)
- Bioplastics for composting (no recycling)

Plastic waste resulting from pre-treatment (e.g. dismantling, sorting) of waste collected from households (entry Y46 in Annex II of the Basel Convention) or waste from products that contain plastic components or partly consist of plastic (e.g. from the pre-treatment of wastes classified under entries B1110, B1115 and B1250) as well as agricultural films are normally classified under entry Y48 or within the EU under EU48.

Note

Plastic waste containing "new" POPs in quantities exceeding the POP limit values of Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POPs) but which do not exhibit any hazardous properties, are to be classified under Y48 or EU48 (for a list of these POPs see Waste List Ordinance 2020 – HP15).

General information on entry Y48

All wastes corresponding to the quality of B3011 but not destined for recycling (but suitable for alternative recovery operations such as pyrolysis, thermolysis, solvolysis, for use as a reducing agent in steel furnaces, for production of or use as "refuse derived fuel" (RDF)) are to be classified under entry Y48.

Plastic wastes not meeting the requirements for classification under B3011, but not exhibiting hazardous properties have to be classified under entry Y48, when exported to or imported from third countries.

3.3 Entries A3210 and AC300 (plastic waste with hazardous properties)

Plastic waste shall be classified as hazardous, if it contains hazardous substances or hazardous wastes or is contaminated to an extent so that it exhibits hazardous characteristics. Such hazardous plastic waste is to be assigned to the entry AC300 when shipped within the EU or OECD-area or entry A3210 in case of import into the EU from third states that do not apply the OECD Decision (notification and consent procedure pursuant to the EC-WSR). The export of these wastes to third states that do not apply the OECD Decision is prohibited.

In order to decide whether plastic waste requiring notification is to be classified as hazardous waste, the persons involved in the shipment should provide the competent authorities responsible for notification with the following information, indicating whether:

1. the waste in question contains hazardous substances or hazardous contaminants as defined in Annex I to the Basel Convention or is contaminated with them,
2. this contamination results in the waste exhibiting any of the hazardous characteristics specified in Annex III to the Basel Convention, and
3. the waste exhibits hazardous properties within the meaning of the Waste List Ordinance 2020.

The following are examples of plastic wastes falling under entries A3210 or AC300:

- Rigid PVC waste containing cadmium or lead stabilisers
- Soft PVC waste containing hazardous phthalates as plasticisers
- Foamed plastic waste containing CFCs/HCFCs (ozone depleting substances) in quantities > 0,1 %
- Plastic waste containing POPs in quantities that trigger a hazardous property (Note: in the case of the "new POPs", an exceedance of the EU POP-limit value does not automatically mean that the waste is hazardous (cf. Waste List Ordinance 2020), but

the waste is to be classified as hazardous, if a hazardous property is fulfilled in accordance with the classification of these POP-pollutants under the CLP Regulation applying the limit values of the respective HP criteria laid down in the waste legislation)

- Charred plastic waste, if the content of polyaromatic hydrocarbons (PAHs) or polyhalogenated dioxins/furans exceed the respective limit values for classification as hazardous waste or which is contaminated with hazardous fire extinguishing agents in quantities such that a hazardous property is met
- Plastic waste containing asbestos (e.g. asbestos as a component in plastics for heat-resistant applications or on the surface of the plastic; old plastic coverings containing asbestos).

4 Interpretation of certain terms

This section provides an interpretation of terms used in the new entries for plastic waste:

- "almost free from contamination and other types of waste"²
- "almost exclusively made from"³
- "temporary storage" in the context of "destined for recycling"

4.1 Interpretation of the terms "almost free from contamination and other types of waste" and "almost exclusively consisting of"

The term "almost free from contamination and other types of waste"

In the introductory phrase of the second indent and in the third indent of entry Y48 and in the introductory phrase of the first indent and in the second indent of entry B3011, the term "almost free from contamination and other types of waste" is used. This term is also used in the introductory phrase of entry EU3011.

Plastic wastes that are not "almost free" from other non-hazardous types of waste (e.g. non-plastic waste on the Green List such as paper, glass, cables, ...) or other non-hazardous contaminants (e.g. from food residues) or consist of mixtures of plastic wastes not explicitly mentioned in the entries B3011 or EU3011 are not to be classified under entries B3011 or EU3011.

The term "almost exclusively consisting of"

The term "almost exclusively consisting of" is used in the first three indents in entry B3011 or EU3011 as follows:

² In relation to "almost free from contamination and other types of wastes", international and national specifications may offer a point of reference

³ In relation to "almost exclusively", international and national specifications may offer a point of reference.

- "consists almost exclusively of a non-halogenated polymer" (including, but not limited to the polymers mentioned in the first indent of B3011)
- "consist almost exclusively of a cured resin or condensation product" (including but not limited to the polymers referred to in the second indent of indent of B3011)
- "consisting almost exclusively of any of the following fluorinated polymers" (Note: this is an exhaustive list; especially post-consumer wastes are not included in this indent).

Plastic waste under entry B3011

Plastic waste may be classified under B3011, if it consists almost exclusively of a single non-halogenated polymer, a single cured resin, or a single fluorinated polymer (as listed in the third indent of B3011). The only exceptions to this rule are the mixtures of the polymers PP/PE and PP/PE/PET in entry B3011.

Hence, any other polymer is considered an impurity ("contamination") in entry B3011.

For the maximum admissible concentration of non-hazardous contamination (i.e. both contamination with non-hazardous non-plastic components as well as mixtures with other types of plastics) **in total a limit value of 2 % by mass, based on the dry matter**⁴ applies for waste of entry B3011 in Austria.

Wastes exhibiting a higher level of contamination usually require further pre-treatment (sorting, cleaning) before recycling and are therefore not covered by entry B3011⁵.

⁴ Note: Plastic wastes (except hazardous plastic wastes of entries A3210 or AC300) that exceed the 2 mass% limit for any other polymer(s) fall under Y48.

⁵ International specifications such as the ISRI specifications set maximum pollutant thresholds. For the plastic wastes covered by B3011 the most frequently mentioned pollutant threshold is 2 % (dry mass). Source: ISRI Scrap Specification Circular - Guidelines for nonferrous scrap, ferrous scrap, glass cullet, paper stock, plastic scrap, electronics scrap, tire scrap (4/16/2018): <http://www.scrap2.org/specs/>

Plastic waste under entry EU3011

Plastic waste destined for recycling

For the maximum admissible concentration of non-hazardous contamination (i.e. both, contamination with non-hazardous non-plastic components and mixtures with other types of plastics) for plastic waste under entry EU3011, destined for direct recycling **without any further pre-treatment** (in AT operation: R3_06) **in total a limit value of 2 % by mass based on dry substance⁶ has been laid down in Austria.**

For plastic waste of entry EU3011 of Annex IIIA (defined mixtures) the different polymers in the mixture are not considered a contamination.

Plastic waste destined for recovery operations other than recycling

If plastic waste of entry EU3011 is destined for a recovery operation other than recycling in EU Member States (e.g. operations classified as R3_01 to R3_04 in Austria such as sorting, washing, the production of refuse derived fuels (RDF), R1 operations such as pyrolysis, energy recovery, use as reducing agent in blast furnaces or pre-treatment processes (R12)), **a total limit of 5 mass % related to the dry mass⁷ is admissible as concentration** of non-hazardous contamination in Austria (i.e. both, contamination with non-hazardous, non-plastic components and mixtures with other plastic types).

For plastic waste of entry EU3011 in Annex IIIA (defined mixtures) the different polymers in the mixture are not considered a contamination.

⁶ Note: Plastic waste (except hazardous plastic waste of entry AC300) exceeding the limit of 2 mass % of impurities in a shipment destined for recycling falls under EU48.

⁷ Note: Plastic waste (except hazardous plastic waste of entry AC300) exceeding the limit of 5 % by mass of impurities when shipped to other recovery operations (except recycling) falls under EU48

Note

In order to prove a certain content of impurities or contaminants, suitable documents (e.g. sorting analyses, chemical analyses) shall be provided upon request of the authority during transport or within the scope of the notification.

The principle of the reversal of the burden of proof (cf. Article 50 of the EC-WSR) is highlighted, i.e. the person who arranges or notifies the shipment shall submit appropriate documents or arrange for analyses to be carried out at his/her own expense prior to the begin of the shipment.

4.2 One instance of temporary storage R13 prior to the recycling process for plastic waste of entry B3011

In entry B3011, the footnotes in relation to "destined for recycling" refer to a "temporary storage limited to one instance", provided that this storage (= no final operation) is followed by the recycling operation R3 and this recycling is evidenced by contractual or relevant official documentation.

It should be noted that only one instance of R13 temporary storage and not a series of R13 operations (or subsequent combinations with the non-final recovery operation R12 in the sense of pre-treatment) via dealers or brokers or pre-treatment facilities shall be permitted.

Upon request of the competent authorities, sufficient documentation detailing the final recycling operation shall be provided (e.g. a contract and other (official) relevant documentation (e.g. subcontracts), including but not limited to the address and details of the authorisation of the final recycling facility or facilities and the final recycling process).

4.3 One instance of pre-treatment process R12 for separate recycling of the individual plastic types in case of mixtures of PE, PP or PET for plastic waste of entry B3011

The preliminary recovery operation R12 in the sense of pre-treatment may be considered as part of the recycling of mixtures of plastic wastes explicitly listed in B3011 that consist of PE, PP or PET, provided that these defined mixtures of PE, PP or PET are destined for separate recycling of each material in an environmentally sound manner. In this case, only one instance of the non-final pre-treatment operation R12 (such as sorting, washing, crushing, etc.) and, if necessary one instance of temporary storage R13 is permissible, provided that it is followed by the recycling operation R3.

B3011 excludes shipments destined for several consecutive R12 pre-treatment operations or one R12 pre-treatment operation followed by more than one R13 temporary storage operation prior to the final recycling process R3⁸.

Upon request, sufficient documentation detailing the subsequent recycling operations for all fractions, the pre-treatment facility (ies) involved as well as the final recovery facility (ies) shall be provided (e.g. contracts or other relevant (official) documentation showing that all plastic fractions of the specified mixture will be recycled in authorised recycling facilities, including the address and details of the authorisation of the final recycling facility (ies) and of the final recycling operation).

⁸ If several pre-treatment operations R12 or temporary storage operations R13 (shall) take place, the entry Y48 is applicable but not B3011. Therefore treatment steps carried out one after the other at different locations are regarded as independent pre-treatment, even if both sites are assigned to the same operator.

Annex 1 – Overview table on shipment of plastic waste

Plastic waste	Intra EU	Export to/import from OECD outside EU	Export to/import from Non-OECD
EU3011	Green list (Art. 18)	N/A (not applicable)	N/A
B3011	N/A	Green list (Art. 18)	Export to non-OECD countries, that are not part of the EU: notification and written consent until publication of the amendment of Commission Regulation (EC) 1418/2007, then country-specific procedure pursuant to the regulation Import: Green List (Art. 18)
Mixtures of plastic waste of Annex IIIA	Green list (Art. 18)	N/A (Y48 applies)	N/A (Y48 applies)
EU48	notification and consent	N/A	N/A
Y48	N/A	notification and consent	Export: prohibition Import: notification and consent
AC300	notification and consent	notification and consent	N/A
A3210	N/A	N/A	Export: prohibition Import: notification and consent

Nota bene

Intra-EU shipments of plastic waste of entry EU3011 in transit through one or more non-EU Member States (third countries) always require the consent of the transit country or transit countries involved, unless the waste can also be classified under B3011. In case of transit through third countries, the entry B3011 would have to be filled in the Annex VII form of the EC-WSR (in addition to the entry EU3011), if applicable.

The person arranging the shipment has to apply to the competent environmental authority in the country or the countries of transit concerned for a consent to the transit.

Annex 2 – Control of the contamination level of plastic waste

Sampling

A sampling plan should be developed first. These plans are only suited for loose material before any thermal treatment transforms it into agglomerates or pellets. When the material has undergone thermal treatment to agglomerate or pelletise it, the determination of the content of non-plastic components should be carried out at the latest stage of reprocessing before thermal treatment is applied to the plastic to agglomerate or pelletise it.

Quantitative (gravimetric) manual sampling of bales consist of the random selection of one or two bales of the consignment. The bale(s) is opened by de-wiring and a sample is taken (often of 30 to 100 kg).

Sampling Plan:

EN 14899 characterization of waste – Sampling of waste materials

Framework for the preparation and application of a Sampling Plan

- CEN/TR 15310 Part 5
- OENORM S 2127

Sampling: CEN/TR 15310 Part 1 and 2

- Sample Preparation: CEN/TR 15310 Part 3 and 4
- CEN/TS 16010: Plastics — Recycled plastics — Sampling procedures for testing plastics waste and recyclates

Analysis

- EN 15002 Characterization of waste – Preparation of test portions from the laboratory sample
- XRF Analysis EN 15309 Characterization of waste and soil — Determination of elemental composition by X-ray fluorescence

Sorting analysis:

ÖNORM S 2097 1-4 Sorting analysis of wastes

Plastic content

Gravimetric procedures can be undertaken with a sorting table and a scale in order to determine the level of contamination with non-plastic components.

The sample is manually sorted in various components (plastic types, paper, wood, glass, etc.). Each category of components is dried and weighed to quantify the amount of non-plastic components and unwanted/unusable plastic, and related to the dry mass.

The moisture content is determined after sampling by weighing, drying and weighing again. The content and nature of the non-plastic components should be determined regularly in order to have a correct overview of the degree of contamination of the plastic waste. This determination should be made prior to the transboundary shipment by the person arranging the shipment, and then by the consignee upon receipt of the waste.

Qualified personnel should assess the characteristics of the plastic waste. In addition to visual inspection, other sensorial controls (odour, texture) should be carried out, appropriate portable sensors can be used.

Non-plastic contaminants, non-target plastics and level of impurities

Analytical methods such as spectroscopy (XRF X-ray fluorescence and/or IR spectroscopy), possibly in combination with e.g. methods such as density separation ("Sink Float Process") or chromatography are possible for the determination of the content of polymers and contamination. Density separation is a less precise method. A microwave digestion may be necessary for chemical analysis of the contaminants.

For assessing the composition of batches of plastic flakes, quick scanners are available, analysing polymer types, false colors, and metal particles within minutes. The plastic material samples are analysed using up to three integrated sensors: Colour sensor; NIR (near infrared) sensor; metal sensor (optional).

XRF methods (also XRF-handhelds) can be used to measure heavy metals, the total bromine content to screen for the presence of brominated POPs or other relevant elements and are often used in the context of assessing compliance with the ROHS Directive (restrictions on Pb, Cd, Hg, Cr, Br). One of the main advantages of using XRF is that it is a non-destructive testing technique that requires no or low-grade sample preparation or special handling. With portable XRF guns, polymers can be tested in situ and within seconds to minutes.

It should be noted, however, that a high total bromine value does not necessarily mean that the bromine originates from prohibited POPs, which are restricted under the EU POP-Regulation. However, this would then require the person who arranges the shipment to provide chemical analyses of the POP content (reversal of the burden of proof).

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