Technical Guidelines for the Import and Export of Plastic Waste

Introduction

The aim of the technical guidelines is to provide a reference document for the local waste industry (recyclers, traders, suppliers etc.) with regard to the transboundary movement of plastic waste that is listed in Annex IX of the Basel Convention[1] on the Control of Transboundary Movements of Hazardous Waste and Their Disposal ("Basel Convention").

Under the Basel Convention, wastes listed in Annex IX are exempted from transboundary movement control (i.e. the need to seek Prior Informed Consent prior to export). Such wastes are also not regulated under the National Environment Agency (NEA)'s Hazardous Waste (Control of Export, Import and Transit) Act and its Regulations.

The guidelines cover the type and quality of plastic waste allowed for import/export. This would facilitate the transboundary movement of plastic waste and ensure that the import/export of plastic waste will be in compliance with the new obligations of the Basel Convention.

The industry **should note** that the technical guidelines do not exempt them from the need to comply with the domestic regulations and requirements imposed by the importing countries of the plastic waste.

Scope of the Technical Guidelines

This set of technical guidelines **is only applicable for plastic waste (under the Customs Harmonised System (HS) code 3915)**

The technical guidelines comprise the following key areas:

Part A:	Types of Plastic Waste Exempted from Transboundary Movement Control
Part B:	Homogeneity Level of the Sorted Plastic Waste
Part C:	Threshold Limits for Non-Plastic Contaminants
Part D:	Processing, Labelling and Packaging Requirements
Part E:	Visual Inspections and Test Reports
Part F:	Other Supporting Information
Part G:	TradeNet Declarations

[1] The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in 1989 and came into force in 1992. As at March 2021, there are 188 Parties to the Basel Convention. Singapore acceded to the Convention on 2 January 1996.

Part A: Types of Plastic Waste Exempted from Transboundary Movement Control

This section provides the industry with an overview of the types of plastic waste that are listed in Annex IX of the Basel Convention and are exempted from transboundary movement control.

Plastic waste types	Examples (non-exhaustive)
(A) Single-stream (homogenous) plastic waste	
Plastic waste almost exclusively[2] consisting of one non-halogenated polymer.	- Polyethylene (PE) - Polypropylene (PP) - Polystyrene (PS) - Acrylonitrile butadiene styrene (ABS) - Polyethylene terephthalate (PET) - Polycarbonates (PC) - Polyethers - Polyphenylene ether (PPE) - Polyphenylene oxide (PO) - Polymethyl methacrylate (PMMA) - Polybutylene terephthalate (PBT) - Polyamides (PA) - Polyacetals (POM) - Polyurethane (PU)
Plastic waste almost exclusively[2] consisting of one cured resin or condensation product.	- Urea formaldehyde resins - Phenol formaldehyde resins - Melamine formaldehyde resins - Epoxy resins - Alkyd resins
Plastic waste almost exclusively[2] consisting of one fluorinated polymer.	- Perfluoroethylene/propylene (FEP) - Perfluoroalkoxy alkanes: ▪ Tetrafluoroethylene/perfluoroalkyl vinyl ether (PFA) ▪ Tetrafluoroethylene/perfluoromethyl vinyl ether (MFA) - Polyvinylfluoride (PVF) - Polyvinylidenefluoride (PVDF)
(B) Mixed plastic waste	
Mixtures of plastic waste that are destined for separate recycling of each material and in an environmentally sound manner, and	Mixtures comprising **only** of the following plastic waste types: - Polyethylene (PE), - Polypropylene (PP) and/or - Polyethylene terephthalate (PET)

[2] In relation to “almost exclusively”, the homogeneity level of plastic waste stated in **Part B** offers a point of reference.

almost free from contamination[3] and other types of wastes	

The source of the plastic waste should be generated directly from post-industrial and/or post-consumer use, and not from any landfill or waste disposal sites. For plastic waste not listed above, the industry may wish to seek clarification from NEA on whether they are exempted from transboundary movement control under the Basel Convention and the Hazardous Waste (Control of Export, Import and Transit) Act. For queries relating to the classification of plastic waste under the Basel Convention, please contact NEA via email at NEA_Basel@nea.gov.sg. For information on other countries' national legislation on hazardous and other waste (including plastic waste) under the Basel Convention, please refer to the Basel Convention website at https://www.basel.int/Countries/NationalLegislation/tabid/1420/Default.aspx.

Part B: Homogeneity Level of the Sorted Plastic Waste

With the exception of mixed plastic waste comprising only PP, PE and PET, all single-stream (homogenous) plastic waste listed in **Part A** shall have minimal contamination by other plastic waste types.

The threshold limits for other plastic waste type(s) are shown in the table below.

Plastic waste type	**Threshold limit for other plastic waste type(s) per bale/bag (by weight unless otherwise stated)**
Single-stream plastic waste as listed in **Part A**	0.5%
Mixtures of PP, PE and PET	0.5%

Part C: Threshold Limits for Non-Plastic Contaminants

To minimise residual waste and rejected plastic waste that will have to be disposed of by the importing country during recycling, all plastic waste destined for import/export (including plastic mixture of PP, PE and PET) shall:

(a) Not be mixed with other types of wastes;
(b) Be free of dirt and other materials; and
(c) Contain minimal residual liquid contents (e.g. water, beverage).

[3] In relation to "almost free from contamination", the threshold limits for contaminants stated in **Part C** offers a point of reference.

The threshold limits for various non-plastic contaminants are shown in the table below.

Type of non-plastic contaminants (non-exhaustive)	**Threshold limit per bale/bag (by weight unless otherwise stated)**
Household waste, including food waste and beverages	0%
Hazardous waste[4], biohazardous waste, e-waste, radioactive waste	0%
Other types of recyclable waste materials, e.g. waste paper, wood-chips, scrap metal, glass, rubber/tyres	0.5%
Water	2%
Others (e.g. stones, dirt)	0.5%
Total allowable non-plastic contaminants (inclusive of all contaminants mentioned above)	2.5%

Part D: Processing, Labelling and Packaging Requirements

This includes but is not limited to the following:

(i) Form and size of plastic waste

Where possible, sorted plastic waste of similar forms and sizes should be baled/bagged together. The acceptable forms of plastic waste include, but are not limited to scraps, shreds, pellets, rolls, films and sheets.

(ii) Colour

In the event the plastic waste type is of different colours, industry may be required to sort the plastic waste according to colour, subject to the importing requirements. Thus, companies should check with the country of import on their processing requirements for the plastic waste prior to any export.

(iii) Bale/bag size and volume

This is based on best industrial practices or requirements imposed by the importing country.

(iv) Labelling

[4] Hazardous wastes refer to wastes defined and controlled under the Basel Convention.

The baled/bagged plastic waste should be clearly labelled with the following information for ease of traceability, accountability and comparison with the details declared in the shipping documents:

- Consignment / batch numbers
- Weight and dimensions of the bale/bag of plastic waste
- Plastic waste type(s) present in each bale/bag and the respective Customs Harmonised System (HS) codes and Product codes declared (i.e. required for both single-stream plastic waste and mixed plastic waste)
- Point of origin and intended destination of plastic waste (i.e. source, country of export, country of import)

(v) Packaging

The plastic waste should be neatly sorted and packed separately according to its plastic type (i.e. a single plastic waste stream in each bale/bag), with the exception of mixed plastic waste comprising only PE, PP and PET which are allowed to be packed together. So long as the bales/bags of plastic waste are separable, a single shipping container would be able to contain multiple well-segregated bales/bags of single-stream plastic waste. However, this is subject to the acceptance by the importing country.

Part E: Visual Inspections and Test Reports

Companies are also required to provide, or obtain from their overseas counterparts, evidence that inspection, testing or certification services have been carried out to ensure that the plastic waste complies with the specifications of plastic waste exempted from Basel Convention's transboundary movement control. This includes, but is not limited to, the following:

(i) Physical checks on the plastic waste by relevant surveyors that are able to provide inspection services for the intended shipment. This includes verifying the cargo quality against required specifications, checks on the general appearance of the cargo and/or packaging, photographic evidence on the state and quality of the plastic waste, and other relevant areas as evidence of proof on the compliance of the shipment.

(ii) Analytical reports and certifications (e.g. detailed breakdown of plastic waste constituents, quantitative risk assessment of materials)

In the event Annex I[5] constituents (e.g. heavy metals, waste oils, asbestos, organohalogen compounds, etc.) are known to be present, companies are advised to send the plastic waste for laboratory testing. The independent analytical reports and certifications are required for establishing the presence of Annex I constituents and assessing whether these constituents render the plastic waste as hazardous.

[5] Reference to the Annexes of the Basel Convention text.

Under the Basel Convention, plastic waste containing Annex I constituents to an extent that it exhibits an Annex III[5] characteristic is classified as hazardous. The transboundary movement (i.e. import, export and transit) of such hazardous plastic waste would require the necessary Basel permits. For plastic waste destined for export, companies should check with the importing country if it has any such requirements for the testing of plastic waste.

Note: NEA does not provide a recommended list nor appoint any official third-party surveyors for the inspections of plastic waste. Companies should ensure that the engaged surveyors have a proven track record for such inspection works. Companies should also engage recognised laboratories with proven track record to conduct analytical testing or certification of plastic waste constituents/contaminants.

Part F: Other Supporting Information

This includes but is not limited to the following:

(i) Physical characteristics of plastic waste

- Dimensions, weight, volume, density, colour and forms of plastic waste
- Content of non-dominant plastic and impurities in each bale/bag (i.e. composition, weight or concentration of other plastic polymer types and impurities)
- Packaging form (e.g. bales or bags)
- Thermal stability
- Chemical characteristics of plastic waste (e.g. presence of additives and reactivity of plastic waste)

(ii) History of waste

- Source or original application of plastic waste (i.e. type of product)
- Processing of plastic waste from collection to prior to export (i.e. washing, sorting, shredding, baling etc.)

(iii) Intended use in country of import (e.g. sale and processing plan)

(iv) Name of a responsible contact at the dispatching organisation

(v) Treatment and disposal process of unusable residue from intended use

(vi) Appropriate handling instructions

(vii) Statement letters from companies and/or approval letters from relevant competent authorities to endorse the necessity of import/export and that the shipment is deemed as non-hazardous plastic waste under the Basel Convention and the importing country's legislation.

Part G: TradeNet Declarations

Under Singapore's domestic requirements, the export and import of plastic waste must be declared via TradeNet[6] prior to their transboundary movement using the appropriate Harmonised System (HS) and Product Codes. This applies to the import and export of all plastic waste under HS code 3915. For more information on the appropriate HS and Product codes to be used, please refer to the full list of HS and Product codes for hazardous waste on the NEA website at https://www.nea.gov.sg/corporate-functions/resources/legislation-international-law/multilateral-environmental-agreements/chemical-safety/basel-convention.

Note: The item descriptions for the list of plastic waste and its corresponding HS and Product Codes are included in the document appended in the URL and can be filtered by typing "3915" for ease of reference.

Besides the bill of lading and invoice for the transboundary movement of the plastic waste, the supporting information and documents listed in **Part F** and reports for the inspections or tests detailed in **Part E** should also be submitted via TradeNet for the export and import of plastic waste.

[6] TradeNet is Singapore's National Single Window for trade declarations where various parties are allowed to exchange trade information electronically. It enables Singapore Customs and other competent authorities to monitor the movement of goods.

References

The following documents were referenced in this set of guidelines. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) would apply.

1. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal: 2019, *Texts and Annexes*

2. BS EN 15347: 2007, Plastics — Recycled Plastics — Characterization of plastics waste

3. European Commission (EC) Joint Research Centre (JRC) Technical Report: 2014, *End-of-waste criteria for waste plastic for conversion*

4. Hazardous Waste (Control of Export, Import and Transit) Act (Cap.122A): 1997

5. ISO 15270: 2008(E), *Plastics — Guidelines for the recovery and recycling of plastics waste*

6. ISRI Scrap Specifications Circular: 2018, *Guidelines for Plastic Scrap*

7. UNEP/CHW.6/21: 2002, *Technical guidelines for the identification and environmentally sound management of plastic wastes and for their disposal*