

Guide to Plastic Waste Export Compliance for US Electronics Recyclers

November 1, 2023

Introduction

The e-Stewards[®] Certification Program created this guide to provide clarity and avenues to appropriately understand and address matters of non-compliance with the Basel Convention by electronics recyclers with respect to trade in plastic fractions of e-waste. Basel non-compliance not only violates the obligations of international law, creates non-conformity with existing e-waste recycling certifications, and places trading partners at risk of prosecution, but also may jeopardize the numerous EPR programs operated by electronics manufacturers in many US States. The observed compliance problem now facing the domestic recycling industry is largely due to an acute lack of capacity for plastics sorting and recycling in the United States, while options of trading the mixed plastic wastes to other nations is limited by the terms of international law. The Basel Convention does not allow trade between Parties and non-Parties (such as the United States) in most circumstances, leaving domestic recyclers, certifications, and EPR programs in a legal bind. e-Stewards recognizes that this problem can best be solved by the industry as a whole working together to insist on compliance while working towards solutions for the medium and longer term. This is the first edition of this Guide. e-Stewards welcomes any updates that stakeholders may provide to assist recyclers in proper legal management of plastic wastes derived from electronic equipment.

I. The Plastic Waste Non-Compliance Problem Explained

The Basel Plastic Waste Amendments

In March of 2019, in response to a growing global plastic waste generation and management crisis, the Parties to the Basel Convention, following the leadership of Norway, agreed to new international controls on the export of plastic wastes. The newfound concern over trade in plastic wastes was due in large part to the fact that China, under their 2018 National Sword policy, suddenly decided to prohibit the import of all but very pure shipments (uncontaminated) of plastic waste. As a result, many countries, particularly in South and Southeast Asia, began to receive large quantities of mixed and contaminated plastic scrap, which would have formerly been sent to China. Only fractions of these loads could be recycled, and the remainder was often dumped and openly burned, creating local and global pollution.

The new Basel rules, which went into the force of international law for Basel Parties on January 1, 2021, were meant to better control these shipments, in particular those that were most likely not going to be recycled properly or only partially recycled. The Basel Plastics Amendments, as they came to be known in Decision 14/12, created three categories of plastic wastes in three new listings -- A3210 (hazardous plastic wastes), B3011 (non-hazardous plastic wastes), and Y48 (plastic waste for special consideration), a very new listing.

Hazardous Plastic Wastes (Annex VIII, A3210)

A3210 (pink in Figure 1) defines hazardous plastic waste. Currently, this listing is not utilized often but may be increasingly as the global community better defines hazardous chemical additives used in plastics. Already it is used by some as a designation of plastics containing brominated flame retardants. A3210 is controlled under Basel -- at a minimum by the notification and consent regime known as "prior-informed consent" or PIC. In some instances, however, it will be banned (e.g., as when it is exported from OECD to non-OECD countries under application of the Basel Ban -- Article 4a of the Convention).

BC-14/12: Amendments to Annexes II, VIII and IX to the Basel Convention

The Conference of the Parties,

Having considered the proposals by the Government of Norway to amend Annexes II, VIII and IX to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal,¹

1. *Decides* to amend Annex II to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal by adding the following entry:

Y48 ^{2,3}	<p>Plastic waste, including mixtures of such waste, with the exception of the following:</p> <ul style="list-style-type: none"> • Plastic waste that is hazardous waste pursuant to paragraph 1 (a) of Article 1⁴ • Plastic waste listed below, provided it is destined for recycling⁵ in an environmentally sound manner and almost free from contamination and other types of wastes:⁶ <ul style="list-style-type: none"> - Plastic waste almost exclusively⁷ consisting of one non-halogenated polymer, including but not limited to the following polymers: <ul style="list-style-type: none"> ○ Polyethylene (PE) ○ Polypropylene (PP) ○ Polystyrene (PS) ○ Acrylonitrile butadiene styrene (ABS) ○ Polyethylene terephthalate (PET) ○ Polycarbonates (PC) ○ Polyethers - Plastic waste almost exclusively⁷ consisting of one cured resin or condensation product, including but not limited to the following resins: <ul style="list-style-type: none"> ○ Urea formaldehyde resins ○ Phenol formaldehyde resins ○ Melamine formaldehyde resins ○ Epoxy resins ○ Alkyd resins - Plastic waste almost exclusively⁷ consisting of one of the following fluorinated polymers:⁸ <ul style="list-style-type: none"> ○ Perfluoroethylene-propylene (FEP) ○ Perfluoroalkoxy alkanes: <ul style="list-style-type: none"> ▪ Tetrafluoroethylene/perfluoroalkyl vinyl ether (PFA) ▪ Tetrafluoroethylene/perfluoromethyl vinyl ether (MFA) ○ Polyvinylfluoride (PVF) ○ Polyvinylidene fluoride (PVDF)
--------------------	--

¹ UNEP/CHW.14/27, annex I.

² This entry becomes effective as of 1 January 2021.

³ Parties can impose stricter requirements in relation to this entry.

⁴ Note the related entry on list A A3210 in Annex VIII.

⁵ Recycling/reclamation of organic substances that are not used as solvents (R3 in Annex IV, sect. B) or, if needed, temporary storage limited to one instance, provided that it is followed by operation R3 and evidenced by contractual or relevant official documentation.

⁶ In relation to "almost free from contamination and other types of wastes", international and national specifications may offer a point of reference.

⁷ In relation to "almost exclusively", international and national specifications may offer a point of reference.

⁸ Post-consumer wastes are excluded.

	<ul style="list-style-type: none"> • Mixtures of plastic waste, consisting of polyethylene (PE), polypropylene (PP) and/or polyethylene terephthalate (PET), provided they are destined for separate recycling⁹ of each material and in an environmentally sound manner and almost free from contamination and other types of wastes.⁶ <p>2. <i>Also decides</i> to amend Annex VIII to the Basel Convention by inserting a new entry, A3210, as follows:</p>
--	--

A3210 ¹⁰	Plastic waste, including mixtures of such waste, containing or contaminated with Annex I constituents, to an extent that it exhibits an Annex III characteristic (note the related entries Y48 in Annex II and on list B B3011).
---------------------	--

3. *Further decides* to amend the entry B3010 in Annex IX to the Basel Convention by adding a new footnote to the entry, as follows: "Entry B3010 is effective until 31 December 2020. Entry B3011 becomes effective as of 1 January 2021."

4. *Decides* to amend Annex IX to the Basel Convention by inserting a new entry, B3011, as follows:

B3011 ¹¹	<p>Plastic waste (note the related entries Y48 in Annex II and on list A A3210):</p> <ul style="list-style-type: none"> • Plastic waste listed below, provided it is destined for recycling⁹ in an environmentally sound manner and almost free from contamination and other types of wastes:⁶ <ul style="list-style-type: none"> - Plastic waste almost exclusively⁷ consisting of one non-halogenated polymer, including but not limited to the following polymers: <ul style="list-style-type: none"> ○ Polyethylene (PE) ○ Polypropylene (PP) ○ Polystyrene (PS) ○ Acrylonitrile butadiene styrene (ABS) ○ Polyethylene terephthalate (PET) ○ Polycarbonates (PC) ○ Polyethers - Plastic waste almost exclusively⁷ consisting of one cured resin or condensation product, including but not limited to the following resins: <ul style="list-style-type: none"> ○ Urea formaldehyde resins ○ Phenol formaldehyde resins ○ Melamine formaldehyde resins ○ Epoxy resins ○ Alkyd resins - Plastic waste almost exclusively⁷ consisting of one of the following fluorinated polymers:⁸ <ul style="list-style-type: none"> ○ Perfluoroethylene-propylene (FEP) ○ Perfluoroalkoxy alkanes: <ul style="list-style-type: none"> ▪ Tetrafluoroethylene/perfluoroalkyl vinyl ether (PFA) ▪ Tetrafluoroethylene/perfluoromethyl vinyl ether (MFA) ○ Polyvinylfluoride (PVF) ○ Polyvinylidene fluoride (PVDF) • Mixtures of plastic waste, consisting of polyethylene (PE), polypropylene (PP) and/or polyethylene terephthalate (PET), provided they are destined for separate recycling⁹ of each material and in an environmentally sound manner, and almost free from contamination and other types of wastes.⁶
---------------------	--

⁹ Recycling/reclamation of organic substances that are not used as solvents (R3 in Annex IV, sect. B), with prior sorting and, if needed, temporary storage limited to one instance, provided that it is followed by operation R3 and evidenced by contractual or relevant official documentation.

¹⁰ This entry becomes effective as of 1 January 2021.

¹¹ This entry becomes effective as of 1 January 2021. Entry B3010 is effective until 31 December 2020.

Figure 1: A screen shot of the actual decision adopted at the 14th Conference of the Basel Parties. This can be found in the report of the meeting linked [here](#) (Decision 14/12).

Non-Hazardous Plastic Wastes (Annex IX, B3011)

The category B3011 (green in Figure 1) is considered non-hazardous plastic waste that is thought to not create many problems during trade and management. These plastic wastes are not controlled under Basel. Below we show the four categories of B3011 that can be freely traded as long as the plastic waste is uncontaminated and is destined for environmentally sound mechanical recycling and not to incineration, landfill, or waste-to-energy destinations:

1. Plastic waste almost exclusively consisting of one non-halogenated polymer (e.g. no PVC) examples: PE, PP, PET, PS, ABS etc.

2. Plastic waste almost exclusively consisting of one cured resin or condensation product. examples: urea formaldehyde, epoxy resins

3. Plastic waste almost exclusively consisting of one of a short list of non-post consumer fluorinated polymer wastes. example: perfluorovinyl ether (PFA)

4. Mixtures of polyethylene (PE), polypropylene (PP) and polyethylene terephthalate (PET) provided they are destined for separate recycling and are free from contamination other types of waste.

Note: Only box 4 above allows a mixture of specific types of polymers or resins. All others must be sorted and isolated as single polymer/resin waste. The Convention left it up to each country to decide acceptable levels of contamination ("almost exclusively consisting of"). The European Union has set this level at 2% of the material by weight that can be allowed to be non-target recyclable plastic for exports from the EU.

Plastic Wastes Subject to Special Consideration (Annex II, Y48)

If the plastic waste shipment to be exported or imported does not qualify as hazardous plastic waste (A3210) nor as non-hazardous waste (B3011), exempted from controls by being mentioned in the four categories above, it should be assumed to be Y48 (yellow in Figure 1). These plastic wastes sit on the Basel Convention's Annex II (wastes for special consideration) and will require at a minimum the PIC procedure between Basel Parties. Between Parties and non-Parties (such as the United States), these will normally be prohibited from trade. Y48 plastics will often be halogenated plastics such as PVC, plastics destined for landfill, incineration, or waste-to-energy, or mixed polymers or contaminated shipments other than the mixture exempted in box 4 above. Currently, most of what is traded internationally is thought to be Y48.

Certainly, electronics recyclers must deal with many types of plastic polymers in the waste stream (see Figure 2), and they have historically not had to deal with separating or cleaning these prior to trade as is now required if one wishes to avoid controls. Most electronic waste will be considered as Y48. If it contains brominated flame retardants it will be considered A3210 in most countries. Both A3210 and Y48 are subject to Basel controls.

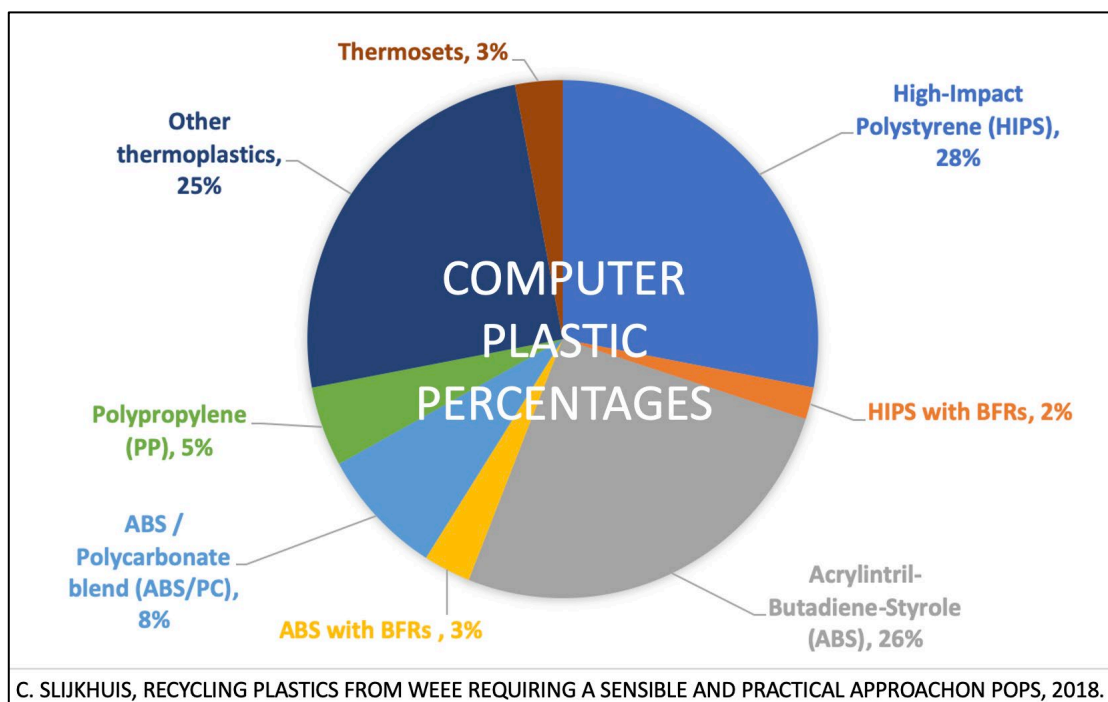


Figure 2

Basel Convention Controls for Y48

A. In most cases, trade between Basel Parties will require Prior Informed Consent” (PIC).

Such trade requires:

- Notification by exporting country and consent of importing country prior to export.
- Assurance of “Environmentally Sound Management” – both importing and exporting countries agree receiving facility is operating in an environmentally sound manner.

Failure to comply with the above in Basel Parties is considered illegal traffic and a criminal act.

B. But in two key instances a trade ban is in effect rather than PIC:

- Exports by the 27 European Union (EU) countries to OECD non-Annex VII countries are banned (the EU has added Annex II Basel listings such as Y48 to their implementation of Article 4a of the Convention).
- Imports from non-Parties, such as the US, are banned by Basel Parties unless a special Article 11 Agreement exists between the trading countries. The only such agreement in place for the United States for Y48 currently is with Canada.

Failure to comply with the above in Basel Parties is considered illegal traffic and a criminal act.

Basel Convention Controls for A3210

A. In most cases, trade between countries requires Prior Informed Consent” (PIC).

Such trade requires:

- Notification by exporting country and consent of importing country prior to export.
- Assurance of “Environmentally Sound Management” – both importing and exporting countries agree receiving facility is operating in an environmentally sound manner.

Failure to comply with the above in Basel Parties is considered illegal traffic and a criminal act.

B. But in two key instances a trade ban is in effect rather than PIC:

- Exports by any member country of the OECD, the European Union (EU) countries, or Liechtenstein (collectively known as Basel Annex VII) to non-Annex VII countries will be banned due to the Basel Ban (Article 4a). This will either be enforceable in the exporting country or the importing country, depending on who has ratified the Basel Ban Amendment. The countries having ratified the Amendment must enforce it. For more information on Article 4a see [the BAN/IPEN report](#).

- Imports from non-Parties, such as the US, are banned by Basel Parties unless a special Article 11 Agreement exists. The US is part of an Article 11 agreement that has been forged as a Council Decision between all the OECD (Organization for Economic Cooperation and Development) member states including the United States. This [OECD Council Decision](#) includes A3210 as OECD Council Decision listing (AC300), making it possible to trade in A3210 (AC300) between any two OECD member countries, including the US. But this Council Decision has not included Y48 due to an objection to do so by the United States.

Failure to abide by the above in Basel Parties equates to illegal traffic which is considered a criminal act.

What This Means for the United States e-Cycling Industry – Legal Compliance

Due to the Basel Party to non-Party trade prohibition described in section B above, electronics recycling companies operating in the United States have a limited number of legal options for exporting their mixed or contaminated plastic wastes coming out of their facilities either shredded or broken up. The trade in Y48 listed plastic wastes between non-Party United States with any Basel Party other than Canada (such as Malaysia) is considered criminal trafficking in waste. Likewise, any trade in A3210 listed hazardous plastic wastes can only take place with other OECD members under the OECD Council Decision accord.

As the US government has not ratified and thus not implemented the Basel Convention into US law, the legal prosecution for the criminal trade will not take place in the United States, but it could very well take place with trading partners in countries that are Basel Parties -- such as Malaysia. Organizations or individuals could also be named in criminal trafficking surveys or port actions conducted by international bodies such as World Customs Organization (WCO), United Nations Office on Drugs and Crime (UNODC), or INTERPOL.

What This Means for the United States e-Cycling Industry – Certification Conformity

In addition to legal liability in national and international jurisdictions, all voluntary Certification schemes to which a recycler may be certified must be compliant with existing relevant laws in all jurisdictions encompassed by their recycling activities In e-Stewards, this requirement is found in 6.1.3. In R2V3, this requirement is found Section I, 4. Non-compliance with the law anywhere in the recycling chain is not an option in any of the voluntary Certifications.

What Compliance Looks Like for the Management of Plastic Waste

Currently, the only compliant management of plastic wastes by United States processors will involve one or more of the following options:

Export or Management of B3011:

1. Domestic management of B3011 (non-hazardous plastic waste) is compliant. Export of B3011 to any Basel Party or non-Party is compliant. As such it must meet one of the four non-hazardous exemptions listed above, and perhaps after cleaning and sorting, meets the contamination limits of the exporting and importing country, and is not destined for landfilling, waste-to-energy, or incineration. If the waste is listed as A3210 (such as plastics containing brominated flame retardants), these would likely not be allowed to non-OECD countries due to the Basel Ban now found as Basel Article 4a.

Export or Management of Y48 or A3210:

2. Domestic-only recycling (throughout recycling chain). Recycling is considered completed once the plastic waste has been converted to clean pellet or flake. Export of clean pellet or flake does not fall under Basel or OECD Controls.
3. Domestic-only waste-to-energy operations, provided such operations do not export some of the material to Basel Parties.
4. Domestic-only incineration or landfilling provided such operations do not export some of the materials to Basel Parties.
5. Export for environmentally sound management in Canada. After the completion of an export to Canada, Y48 material could be exported again to a Basel Party under the terms of a new Basel export PIC procedure. Export of A3210 from Canada would however likely violate the Basel Ban Amendment (Article 4a).
6. Export for environmentally sound management in any OECD countries using the OECD Council Decision, as long as the waste is characterized as hazardous plastic waste (A3210) by both trading partner countries.



II. How can e-Stewards and Other Standards Address the Problem of Non-Compliance?

e-Stewards

Currently, the e-Stewards Standard considers Y48 and will consider Y49 (upcoming e-waste listing going into force in 2025 mentioned in FAQ11 below) to be a Material of Concern (MOC). All MOCs are subject to an export ban to developing countries (such as Malaysia), even though the Basel Convention itself does not go this far.

Following an endorsement from the e-Stewards Leadership Council during its XXVIII Meeting on October 17 – 18, 2023, e-Stewards will now take steps to align itself with the strict reading of the Basel Convention and consider amending the Basel Annex II listings (Y48 and Y49) to consider them as Problematic Components or Materials. We will also seek to amend the Standard to exempt PCM exports from being banned under the Basel Ban (Article 4a). However, the Annex II PCMs will be subject to Prior Informed Consent and only possible between Basel Parties or between Parties operating under a valid Basel Article 11 agreement. In this way, e-Stewards will be in strict alignment with the Basel Convention as it is applied globally. The e-Stewards Leadership Council has endorsed making this change at the earliest opportunity through its Sanctioned Interpretation amendment process. With the publishing of this Guide, action to commence this process is underway.

While this change is underway, non-compliance to the e-Stewards Standard by allowing the export of Y48 from the US (a non-Party) to Parties (such as Malaysia) is now, and going forward, illegal under the Basel Convention. It is considered a non-conformity which must be addressed as such by our auditors and Certifying Bodies. The change noted above, however, will allow for the possibility of future Basel Ratification or a bilateral agreement to provide compliant pathways for e-Stewards. Further, the current reading of the Critical non-Conformity Policy of e-Stewards is relegated to HEWs only and not

PCMs. This will ensure enforcement of the Basel Plastics Amendments but not suspension or withdrawal from the e-Stewards program.

Other Standards

It is unclear as of this edition of this guide how the R2V3, RIOS, or other standards will address this important matter. As noted above each standard requires their certified companies to comply with all laws. R2V3 states this as a general principle in Section 1, 4 as follows: “General Principle: To comply with all applicable environmental, health, safety, and data security legal requirements, and only import and export electronic equipment, components, and materials in full compliance with all applicable importing, transit, and exporting countries’ laws.” The R2V3 Standard notes this but does not currently list Y48 or A3210 as being a material of special interest, and thus it is possible that auditors will not be aware of these listings as being important triggers for compliance or non-compliance with international waste trade law. It will be important for all Standards to assure alignment and similar conformity verification with the Basel Convention requirements to ensure a level playing field globally.

III. Possible Compliant Destinations for Y48 or A3210 Plastic Wastes, Now or in the Near Future

The following list of commercial destinations does not indicate an endorsement by e-Stewards/BAN, nor does it guarantee that these companies currently have capacity for accepting plastic wastes. Each recycler will need to carefully vet each downstream vendor for a variety of criteria in accordance with their policies and Certifications. Recyclers will also need to ensure that these destinations guarantee that their own downstream vendors are also compliant with the Basel Convention rules cited in Section I above.

A. Electronics Recyclers in the US or Canada that Accept Plastic Waste from Upstream e-Cyclers

1. Universal Recycling Technologies (URT) – COMING END OF Q1 2024
2535 Beloit Avenue
Janesville, WI 53546
Tel: 877-278-0799
Contact: Ray Zielke, Vice President of Sales, rzielke@urtsolutions.com
2. CompuCycle Inc. – COMING END OF Q1 2024
8019 Kempwood Dr.
Houston, TX 77055
Tel: 713-869-6700
Contact: Clive Hess, chess@compucycle.com
3. EvTerra Recycling – COMING JANUARY 2024
1500 South Point Dr., Suite 200
Forest Park, GA 30297
Tel: 404-963-7990
Contact: Joey Fojtik, joeyf@evterrarecycling.com
4. ADL Process

195 Nantucket Blvd
Scarborough, ON, Canada M1P2P2
Tel: 416-769-5625
Contact: info@adlprocess.com

5. eCycle Solutions Canada
(Multiple locations)
Tel: 888-945-2611
Contact: insidesales@ecyclesolutions.com

B. Plastics Recyclers or Sorters in the US or Canada

1. Plastic Recycling Inc.
7601 Rockville Road
Indianapolis, IN 46214
Tel: 317-780-6100
Contact: Brandon Shaw, President, brandon@plastic-recycling.net
2. Bomet Polymer Solutions
39 Alice Street
Branford, ON, Canada N3R 1Y1
Tel: 519-759-1420
Contact: Shan "Bo" Zhang, bo@bomet.ca
3. Le Groupe Lavergne
8800 1^{er} Croissant
Montreal, Canada IT H1J 1CB
Tel: 514-354-5757
Contact: info@lavergne.ca
4. Hanil Eco Solutions
401 S. Grand Ave
Santa Ana, CA 92705
Tel: 714-852-3336
Contact: Hong Suk Yoon, President and CEO, hsyoon@hanzinc.com
5. Butler MacDonald
5955 W 80th Street
Indianapolis, IN 46278
Tel: 317-830-0055
Contact: Ben McPherson, bmcpherson@butlermacdonald.com
6. KW Plastics
279 Pike County Lake Road
Troy, AL 36079
Tel: 800-633-8744
7. Granite Peak Plastics
1525 S. Vandeventer Ave
St. Louis, MO 63110
Tel: 314-963-8000

Contact: info@granitepeakplastics.com

C. Waste to Energy (WTE) Facilities in the US or Canada

Find listed WTE facilities in the US here: <https://wtert.org/wp-content/uploads/2023/02/WtE-facilities-2018-directory.pdf>

D. Plastics Recyclers in other OECD Countries

1. Sostenplas
C/Fresno 89, Poligono Industrial Nicomedes
Garica, 40140, Valverde Del Majano
Segovia, Spain
Tel: +34 921 52 42 50
Contact: Pablo Leon, pablo@sostenplas.es
2. Coolrec Plastics
Van Hilststraat 7
NL-5145 RK Waalwijk
The Netherlands
Tel: +31 416 347 373
Contact: Ramon Bongers, ramon.bongers@coolrec.com
3. MGG Plastics
Wipark, 12. Str. 8
3331 Kematen/Ybbs, Austria
Tel: +43 7476 774 88
Contact: Gunther Hoggerl, hombroukx@mgg-polymers.com
4. Bage Plastics
Eisenstrasse 1
4502 St. Marien, Austria
Tel: +43 7227-22210
Contact: Manfred-Mathias Geyer, geyer@bage-plastics.com
5. AO Recycling Plastics
Halesfield 15
Telford, UK
Tel: +44 (0)1952 583 666
Contact: Chris Caffrey, chris.caffrey@ao.com
6. Interrecycling
Gachenweg 16
D 83088 Kiefersfelden
Bayern Germany
Tel: +49 8033 – 308 15 32
Contact: Ricardo Vidal, operations@interrecycling.com
7. Indumetal (Coming soon)
Carretera de la Cantera, 11

E-48950 ASUA-ERANDIO
(Bizkaia) SPAIN
Contact: Juan Jose Ayo, jjayo@indumetal.com

E. Landfills, Incinerators and Cement Kilns

(too many to list)

IV. Frequently Asked Questions

1. How much computer plastic is managed by e-waste recyclers in the United States?

One cited reliable source (2019) estimated that 30% of electronic waste is plastic by weight. The US EPA reports that in 2018, the US collected and recycled about 1,040,000 tons of electronic waste. 30% of that would equal 312,000 tons. This figure is provided for consideration purposes only. Due to the large number of variables such as relative weights to other e-waste components and the definitions of electronic waste, such figures cannot be taken as definitive.

2. How much of this is currently moving to developing countries such as Malaysia?

It is very difficult to say. Based on anecdotal information from the industry, about 70% of the plastic collected by US electronics recyclers is said to be exported to Malaysia. This must be viewed as being very close to an estimated non-compliance rate as it is doubtful that these are streams that are cleaned and separated. We fear that we could be witnessing about 125,000 US tons per annum of illegal trade in plastic waste. The UN Comtrade data for 2022 reports 38,783 US tons of plastic waste (HS3915) shipped from US to Malaysia. UN Comtrade data is based on Bills of Lading that list but one HS code, and if such codes are not utilized precisely by shippers, they can under-report weight.

3. What is the price difference between various disposition options for recyclers in the US?

We recommend that due to rapidly fluctuating markets, pricing inquiries be made directly with potential vendors. However, to understand the allure of illegal exports, we offer the following rough sketch of the situation. Sending mixed plastic waste to domestic companies for processing can either pay or cost between 2 cents/lb. Malaysian recyclers can pay 10-11 cents/lb. including shipping costs. Sending mixed plastic waste to landfills can cost 5-8 cents/lb. Thus, the differential between export to Malaysia and landfilling domestically can be about 15 cents a pound. If a larger recycler processes 100 million lbs. of e-scrap per year and 30% of that is plastic, managing it via export instead of landfilling domestically amounts to a difference of \$4.5 million. Export could even pay up to \$3.3 million/year, while landfilling the material might cost \$2.4 million/year, if the extremes of the price range are considered. Waste-to-energy costs are unknown at this time, but it is feared that many facilities are not set up to burn pure plastic as it burns too hot for their expected set-up based on inputs of mixed solid waste.

4. Can exports to Canada (a Basel Party) be seen as a viable pathway for US e-Cyclers?

On the face of it, it would seem that exports for management of Y48 plastic waste from the US to

Canada is legal due to the [Arrangement signed between the US and Canada](#). We do not anticipate objection by Canadian Basel competent authorities to such movements as long as the transaction is terminated in Canada via importation and not seen as shipment in transit to another destination. After the import, Canadian entities can then conduct another export of the plastic waste in accordance with the Basel Convention rules, which apply with all non-OECD countries. Exporters will need to corroborate the acceptability of this option with Canadian authorities.

5. Why have there not been higher levels of investment in domestic plastics recycling to date?

The domestic plastics recyclers we have spoken to would love to expand their capacity (for example by adding additional sink-float tanks), but without greater guarantees of both front-end volumes and back-end markets, the risk is too high. First, as long as there is a lack of enforcement on the Basel Convention in Malaysia and the US government fails to control exports, there is little possibility of competing with the lower operational costs in Malaysia. Second, there is a limited market for post-consumer recycled content. While many OEMs like to tout PCR use, it is not legally mandated and is rarely that easy to use recycled materials for highly specialized and engineered end-uses. Further, the low price of virgin plastic, which is also easier to directly use in a variety of specifications, makes recycled plastic less competitive. One North American recycler has had to slow down production due to a lack of buyers of PCR.

6. Why does Malaysia allow import of Basel-controlled wastes from the US when it is illegal?

In Malaysia, two different Ministries appear to be creating an internal governance conflict. The Ministry of Environment's Department of Environment is listed as the competent authority under Basel and is thus responsible for ensuring all imports of Basel-controlled wastes are legally undertaken. However, the Ministry of Local Government Development is the Ministry that issues waste import permits. The two Ministries appear to be working at cross purposes with one another as import permits are given to facilities but not on each shipment, as is required by Basel. Nevertheless, ignoring international treaty obligations is not an option for Malaysia. The Basel Convention allows no "reservations." All Parties are obligated to uphold Basel. They are not allowed to import Y48 or A3210 plastics from the United States, as long as the US is a non-Party and there is no Article 11 agreement in place that would allow such exports to Malaysia from the US.

7. Why does the United States government do nothing to prevent the export when it is illegal?

Not being a Basel Party, the US government does not recognize the waste listing Y48 as being subject to trade controls. As for A3210, they do recognize the OECD equivalent of this listing known as AC300, but it is not forbidden to export to any non-OECD countries. The US could certainly warn their exporters and the importing governments that the exports are on their way and that they are illegal, but so far has refused to take such actions. They claim to lack the authority in the absence of US Basel Convention ratification to take any action to halt such trade, even when they know it is illegal once it leaves the US.

8. Can the US ratify the Basel Convention and remedy the non-compliance situation?

The US is the only developed country in the world that has not ratified the Basel Convention. The US and Haiti are the only remaining countries that signed the treaty in 1989 indicating their intent to ratify but have not done so. If the US ratified the Basel Convention, then exports of Y48 to environmentally sound facilities in Malaysia or any other Basel Party would be possible under the prior-informed consent procedure. Exports of A3210 would not be possible due to the Basel Ban Amendment found now as Article 4a, and the US would be forced to accept now that it is part and parcel of the Convention they would be signing.

9. Is it possible to create a bilateral agreement between Malaysia and the United States?

If the governments of the United States and Malaysia wished to do so, they could sign a bilateral agreement to accept Basel-controlled Y48 US plastic wastes into environmentally sound facilities in Malaysia with prior informed consent (PIC). This would be like the bilateral agreement they already signed with Malaysia to trade Basel-controlled waste coming from Malaysia and moving into the US. This could be done as an interim arrangement until the US ratified Basel.

10. Is what happens at Malaysian processors considered environmentally sound management (ESM)?

Environmentally Sound Management (ESM) is defined as taking all practicable steps to protect human health and the environment. It currently remains an open question with BAN whether Malaysia has any plastics recycling facilities that operate with true ESM. To determine this, one would need to look at them facility by facility and understand how much of the incoming waste is actually being safely recycled and what happens to the unrecyclable fraction. Does the unrecyclable fraction include plastics that contain brominated flame retardants or other hazardous additives? Is it being dumped in landfills that are properly engineered? Is it burned and what is the nature of the incineration operations? Is it open burning or in unregulated boilers or furnaces? Or high-tech carefully engineered incinerators? Also, one would need to look at what happens with wash waters which contain contaminants and micro-plastics. Further, if any melting of plastics goes on in the facility, it would be essential to avoid volatile organic compound emissions that could be inhaled by workers. These are the kinds of investigations needed to determine the safety and ESM of the recycling operations.

11. What can the original equipment manufacturers (OEMs) do to help this problem?

The OEMs can certainly act in various ways to help ameliorate the identified compliance problem.

1. They can recognize now that many of their EPR collection schemes in various states are out of compliance with international law and take immediate steps to ensure that their processors are strictly in compliance. This will entail ensuring they pay for compliant recycling, which will be more expensive than non-compliant export to Malaysia.
2. They can press the United States to ratify the Basel Convention and, in the meantime, consider a bilateral agreement with Malaysia if it ensured PIC procedures and ESM.
3. They can consider assisting financially in the building of capacity in the United States for domestic recycling and sorting capacity.
4. They can re-evaluate their post-consumer plastic use policies to increase the use of post-consumer plastics if they are without hazardous additives.
5. They can strongly consider an over-arching policy to phase out, to the extent possible, plastic in all of their products due to a lack of circular properties in plastic generally.

12. Is addressing the plastics export issue only the beginning of Basel concerns?

Yes, in 2025, the Basel Convention will bring another set of amendments into force which intend to control all electronic wastes other than existing non-hazardous waste listings (such as non-hazardous metals such as B1010) with at least the PIC procedure. Once this happens, as with Y48 plastic waste, as the US is not a Basel Party, Basel Parties will be off-limits to trade in most electronic equipment, components, parts, and residues, (Y49) with the United States, regardless of their hazardousness. Therefore, it makes sense to address these Party to non-Party issues for Basel Annex II wastes in a comprehensive way and for the longer term now.



Basel Action Network
80 Yesler Way
Seattle, WA. 98104

phone: 206-652-5555
e-mail: info@e-Stewards.org
web: www.e-Stewards.org