Report: U.S.-EU Virtual Workshop on Plastics Recycling Standards and Definitions to Support Transatlantic Trade

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Executive Summary

This report was written following a virtual government-to-stakeholder event hosted on October 1, 2024 by the U.S.-EU Trade and Technology Council (TTC)'s Plastics Recycling Workstream of Working Group 1: Technology Standards, with representatives from the United States (U.S.) Government and European Union's (EU's) European Commission (EC). The event brought together stakeholders from the U.S. and EU with expertise in the plastic industry, plastic recycling industry, plastic recycling standards, and transatlantic trade to answer the question *Which plastics recycling standards and definitions matter the most for EU-U.S. trade?* This report summarizes the feedback received from stakeholders and provides a high-level analysis of the priorities raised by EU and U.S. stakeholders. The consensus was that more multi-stakeholder dialogues should be prioritized moving forward, such as workshops like this one, working groups, and official collaborations like that between the Association of Plastics Recyclers (APR) in the U.S. and RecyClass in the EU. These engagements may focus on themes from this workshop, such as food-contact material for packaging, recycled content and recycled material quality, substances of concern, and chain of custody. These engagements should consider including stakeholders from U.S. and EU governments; the private sector; and standards organizations like ANSI, ASTM, and CEN. A list of relevant existing standards, standards under development, and needed standards was also developed.

The U.S.-EU TTC supported the organization of this event. The TTC aims to promote U.S. and EU competitiveness and prosperity and the spread of market-oriented values by increasing transatlantic trade and investment in products and services of emerging technology, strengthening our technological and industrial leadership, boosting innovation, and protecting and promoting critical and emerging technologies and infrastructure.

Background

The U.S.-EU Trade and Technology Council (TTC) was established in June 2021 to support cooperation between the United States (U.S.) and the European Union (EU) on trade, technology, and economic policy. It serves as a platform to address challenges related to global trade, emerging technologies, and supply chain security while promoting shared values and strengthening transatlantic economic ties. The TTC established 10 Working Groups (WGs) chaired by relevant U.S. and European Commission (EC) agencies. WG 1 – Technology Standards was tasked with developing approaches for coordinating in critical and emerging standards and is led by the National Institute of Standards and Technology (NIST) and the International Trade Administration (ITA) for the U.S. and the Directorate General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) and the Directorate-General for Communications Networks, Content and Technology (DG CONNECT) for the EU. WG 1 operates through several workstreams on different topics, including the Plastics Recycling Workstream.

WG 1's Plastic Recycling Workstream (referred to moving forward as the Workstream) is led by a representative from NIST and DG GROW and was tasked with identifying 1) which standards exist to support the trade of recycled plastics and products containing recycled plastics between the U.S. and EU and 2) where there is a need to create new standards or better align existing standards. The Workstream has been meeting since February 2024 with leadership from one U.S. and one EU standards development organization: ASTM International's plastics committee (D20) and CEN-CENELEC's plastic recycling committee (CEN/TC 249), respectively.

The Workstream assessed the standards landscape in the U.S. and EU and concluded that there is a lack of alignment around standards and terminology, including around topics such as recyclates, resin types, and post-consumer waste. It also identified three focus areas for future work:

1. Terminology,
2. Design for recycling, and
3. Upcoming EU circular economy regulations.

The Workstream realized that input from experts in plastic recycling standards, terminology, and transatlantic trade would be necessary to create this alignment. Therefore, they organized a virtual *U.S.-EU Workshop on Plastics Recycling Standards and Definitions* on October 1, 2024. Industry, nonprofit, and government stakeholders from the U.S. and EU were invited to apply to participate, with applicants chosen based on their background first in plastic recycling trade and standards, then in plastics recycling broadly.

Workshop structure

Fifty-nine people (48 from the private sector, 11 from the U.S. and EU governments) were convened for the 2.25-hour workshop. Sophie Mueller, Head of the Standardisation Unit for DG GROW (EU), and Anthony Quinn, Team Lead – Standards for the ITA (U.S.), gave opening remarks. Then representatives from ASTM International's plastics committee (D20) and CEN-CENELEC's plastic recycling committee (CEN/TC 249) introduced the motivation for the workshop and the workshop's guiding question: *Which plastics recycling standards and definitions matter the most for EU-U.S. trade?* Private-sector participants entered breakout rooms of six people, with an even split between U.S. and EU representatives (government participants were excluded from the breakout rooms), to answer four questions:

1. Which plastic recycling *definitions* have the most impact on trade between the U.S. and EU? Are there potential issues?
2. Which plastic recycling *standards* have the most impact on trade between the U.S. and EU? Are there potential issues?
3. Which sectors or sub-sectors are most relevant to this discussion? (e.g., plastic materials, products, packaging)
4. What steps can be taken to create further alignment between the U.S. and EU?

Participants reconvened for a whole-group discussion on their responses.

Ease of trade

Participants rated the ease of trading recycled plastics between the EU and U.S., on average, at 5.6 on a scale of 10 (with 1 being impossible and 10 being very easy with no issues), and the ease of trading plastic products with recycled content at 6.1 (6.3 from the EU to the U.S. and 5.9 from the U.S. to the EU), suggesting that market operators encounter some issues when trading these items across the Atlantic.

When asked what mattered the most to ensure easy EU-U.S. trade of plastic materials, products or packaging, a majority of participants mentioned the need for aligned definitions, rules, and regulations (9 votes), particularly regarding food contact material regulations (6 votes). Another cluster of ideas (3 votes) was around the need for ensuring traceability for recycled materials, including in trade data.

Themes

Six themes emerged from the discussions on potential trade barriers due to differing regulations, standards or definitions between the EU and the US, suggesting a need for alignment to facilitate trade. This report only presents these themes and summarizes the workshop's discussion surrounding them. While more context on the policy, research, standards, and market landscapes will be needed to overcome the trade barriers discussed surrounding these themes, this context is outside the scope of this report.

Recycled content and chain of custody: Definitions (e.g., definitions of recyclate and post-consumer, post-industrial, and pre-consumer wastes), calculation methods (e.g., mass balance and its various attribution models), and traceability (i.e., chain of custody) of recycled content were among the most frequently mentioned topics, with participants suggesting a strong perceived need for alignment. Some participants also mentioned the importance of ensuring a common language and traceability on recycled content in transatlantic trade, including through documentation or certificates.

Food packaging. A number of sectors were presented as relevant to the workshop's theme: medical, automotive, batteries, electrical and electronic equipment (EEE), building and construction, agriculture, and textiles. However, the most-discussed sector was packaging, especially food-grade packaging. The U.S. Food and Drug Administration (FDA) and European Food Safety Authority (EFSA) have different requirements for food-grade packaging, leading to different specifications for selling this packaging in the U.S. and EU. Packaging producers in the workshop and their representatives expressed uncertainty around how to be compliant with FDA and EFSA rules, with a perceived need for further alignment of rules between the EU and the U.S.

Recycled material quality. Several participants suggested that better standards are needed to harmonize recycled plastic and feedstock qualities. Bale specifications exist in the U.S. under the Recycled Materials Association (ReMa, formerly the Institute of Scrap Recycling Industries) and quality grades for sorted plastic wastes are being developed in CEN. A number of testing methods for recycled plastics also exist through ASTM and CEN, but better visibility around these standards and alignment may be needed to overcome the challenges expressed during the workshop. Several stakeholders expressed a need to align on recyclability standards. Design-for-recycling guidelines are being developed by CEN and APR, including for plastic packaging and automotive plastics.

Substances of concern. Compliance with U.S. and EU regulations around substances of concern—e.g., PFAS, micro- and nanoplastics—was a challenge identified by workshop stakeholders. The EU's Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation includes a list of these materials for the EU. It was also suggested that companies importing products containing chemically recycled plastics (plastics recycled via chemical recycling) into the U.S. struggle to comply with the EPA's Toxic Substances Control Act (TSCA); once the material stops being waste and starts being a feedstock again, detailed compositional information on the feedstock is needed to ensure compliance with the TSCA.

Market development. One goal of eliminating trade barriers for recycled plastics and the products containing them between the U.S. and EU is to support the development of the plastic recycling industry. Workshop participants hoped that establishing common policy agendas between the nations could support the recycling economic model. Participants also asserted that one challenge to both market development and policy alignment between the nations is that the U.S. lacks national targets for recycled plastics, while the EU does have specific targets. This lack of targets 1) may be inhibiting the development of the plastic recycling market, both upstream and downstream, and 2) stifles alignment opportunities between the U.S. and EU. Regarding the latter, national targets could create more points of contact through which the nations can align.

Collaborations. Workshop participants suggested that creating better alignment between the U.S. and EU to support the trade of recycled plastics and products containing them will require collaborations between several groups. For example, an online repository listing U.S., EU, and other international standards was proposed; this could be sponsored by U.S. and EU government agencies, or by CEN and ANSI or ASTM.

- *Intragovernmental collaborations*: Some of the most important standards for trade are those recognized by U.S. and EU government agencies (see Figure 1 for examples). However, while these agencies may rely on some of the same standards, there was concern that agencies in the same governments do not sufficiently coordinate to align on using consistent standards and terminologies.
- *Intergovernmental collaborations*: A lack of alignment between the U.S. and EU was also recognized as a trade barrier. This includes the fact that virgin and recycled materials share a harmonized system (HS) code. HS codes are international trade codes that describe products being traded; thus, virgin and recycled materials sharing one code makes it difficult for the U.S. and EU to distinguish between them for trade purposes.

- *Standards organizations*: It was suggested that ANSI and CEN or ASTM and CEN should continue dialogues to harmonize existing plastics recycling standards and strategize about beneficial new standards.

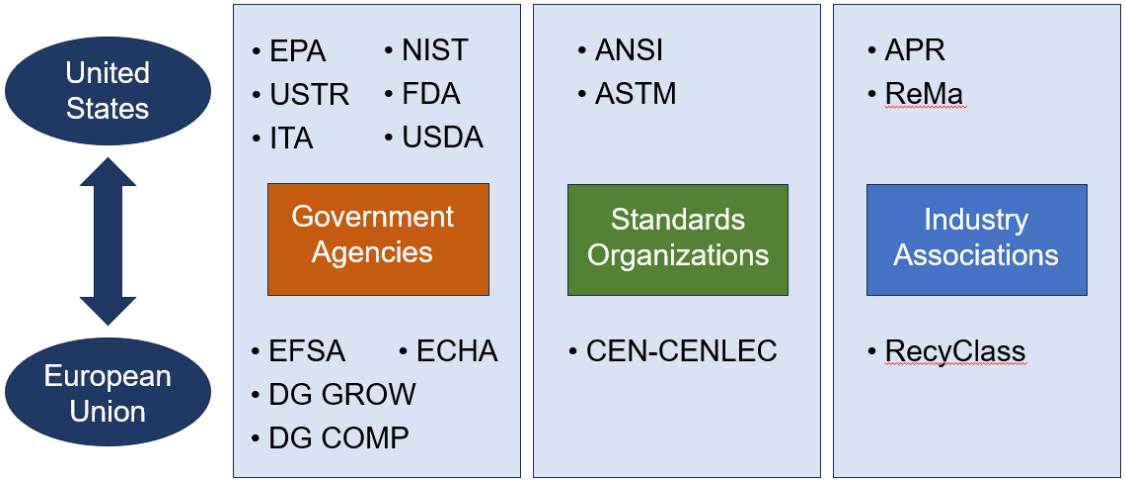

Figure 1 Potential collaboration areas between the U.S. and EU suggested during the workshop. Collaboration opportunities exist 1) between government agencies, 2) between standards development organizations, and 3) between industry associations. Note that instutions included here were explicitly mentioned during the workshop and do not represent an endorsement from the U.S. or EU governments.

Standards

Several existing (Table 1) and emerging ISO, CEN, ASTM, and UL (Underwriters Laboratories) standards for plastic recycling and recycled plastic terminology were deemed important for U.S.-EU trade during the workshops. The list in Table 1 is not comprehensive, and future efforts should be made to build a more comprehensive list. Standards may also be a means to overcome the challenges discussed in the topics above. Many standards needs were also recognized.

Table 1 Standards that workshop participants mentioned are important to U.S.-EU trade in recycled plastics and the products containing them.

Standard/Committee	**Scope**
ISO 14021:2016 – Environmental labels and declarations	Terminology
ISO 472:2013 – Plastics — Vocabulary	Terminology
EN 17615:2022 Plastics – Environmental Aspects – Vocabulary	Terminology
ASTM D883-24 - Standard Terminology Relating to Plastics	Terminology
EN 15343:2007 - Plastics - Recycled Plastics – Plastics recycling traceability and assessment of conformity and recycled content	Recycled content
ISO 14021:2016 - Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)	Environmental claims
CEN/TC 261 – Packaging	Packaging
UL 2809 – Recycled Content Validation	Recycled content

Standards under development: CEN is developing several standards that would be relevant to the trade of recycled plastics and the products containing them. These include, but are not limited to, quality standards for recycled plastics, including characterization methods, standards on quality grades for sorted plastic wastes, and design for recycling guidelines for the packaging and automotive industries. A DIN (Germany) draft standard was also highlighted: *DIN EN 18065:2024-03 - Draft. Plastics - Recycled plastics - Classification of recycled plastics based on Data Quality Levels for use and (digital) trading*. Several standards being developed by ASTM International were also mentioned, including two guides from their sustainability committee (E60) on product design for a circular economy (ASTM WK88282 New Guide for Designing for Recyclability of Single-Use Medical Products and Packaging; ASTM WK83603 New Guide for Principles for Circular Product Design) and others on test methods for recycled plastics (note that ASTM already has a number of test methods and guides that are applicable to recycled plastics). Finally, some participants expressed hope that *ISO/CD 13662: Chain of Custody — Mass Balance — Requirements and guidelines* will resolve some uncertainties regarding mass balance, recycled content, and the sources of recycled plastics.

Terminology

A number of terms were also deemed important to define for the trade of recycled plastics and the products containing them between the U.S. and EU. It was suggested that ensuring that these terms and their definitions are aligned between governments, agencies, standards development organizations, and companies will support trade:

- Recycling: advanced recycling, chemical recycling, mechanical recycling, physical recycling, organic recycling
- Recycled content; attributed recycled content
- Sources of recycled materials: pre-consumer, post-consumer, post-industrial
- Single-use, non-durable, and durable
- Greenwashing; green claims on recycled content

Summary and next steps

Consensus was clear that more multidisciplinary discussions like these are necessary to better understand trade barriers between the U.S. and EU in recycled plastic and the products containing them and strategies for overcoming these barriers. Further dialogue between governments, across agencies within governments, and between standards development organizations are also needed. This workshop report offers themes to guide these further discussions. In addition, workshop participants suggested that the U.S. creating recycled content goals for plastics could both support the development of the plastic recycling industry and create more opportunities for alignment with the EU.

Acronyms

ANSI	American National Standard Institute
APR	Association of Plastics Recyclers
ASTM	ASTM International
DG COMP	Directorate-General for Competition
DG GROW	Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
EEE	Electrical and electronic equipment
EPA	U.S. Environmental Protection Agency
ECHA	European Chemicals Agency
CEN-CENELEC	European Committee for Standardization
EFSA	European Food Safety Authority
FDA	U.S. Food and Drug Administration
DIN	German Institute for Standardization
ITA	U.S. International Trade Administration
NIST	U.S. National Institute of Standards and Technology
ReMa	Recycled Materials Association
SMEs	Small- and medium-sized enterprises
USDA	U.S. Department of Agriculture
USTR	U.S. Trade Representative