



# EPA IMPORT REQUIREMENTS FOR HYDROFLUOROCARBONS (HFCs)

April 2025

# Agenda

- What are hydrofluorocarbons (HFCs)?
- What do the regulations require?
- How to file in ACE
- Technology Transitions regulations
- Questions & additional resources

# What are hydrofluorocarbons?

- Hydrofluorocarbons (HFCs) are used as replacements for ozone-depleting substances (ODS) in refrigeration, air conditioning, foam blowing, aerosols, and fire suppression
- Absent effective regulations, HFC use and emissions were expected to continue increasing rapidly worldwide
- In the United States and globally, HFCs are being phased down
- U.S. companies are at the forefront of developing and commercializing new technologies to replace HFCs

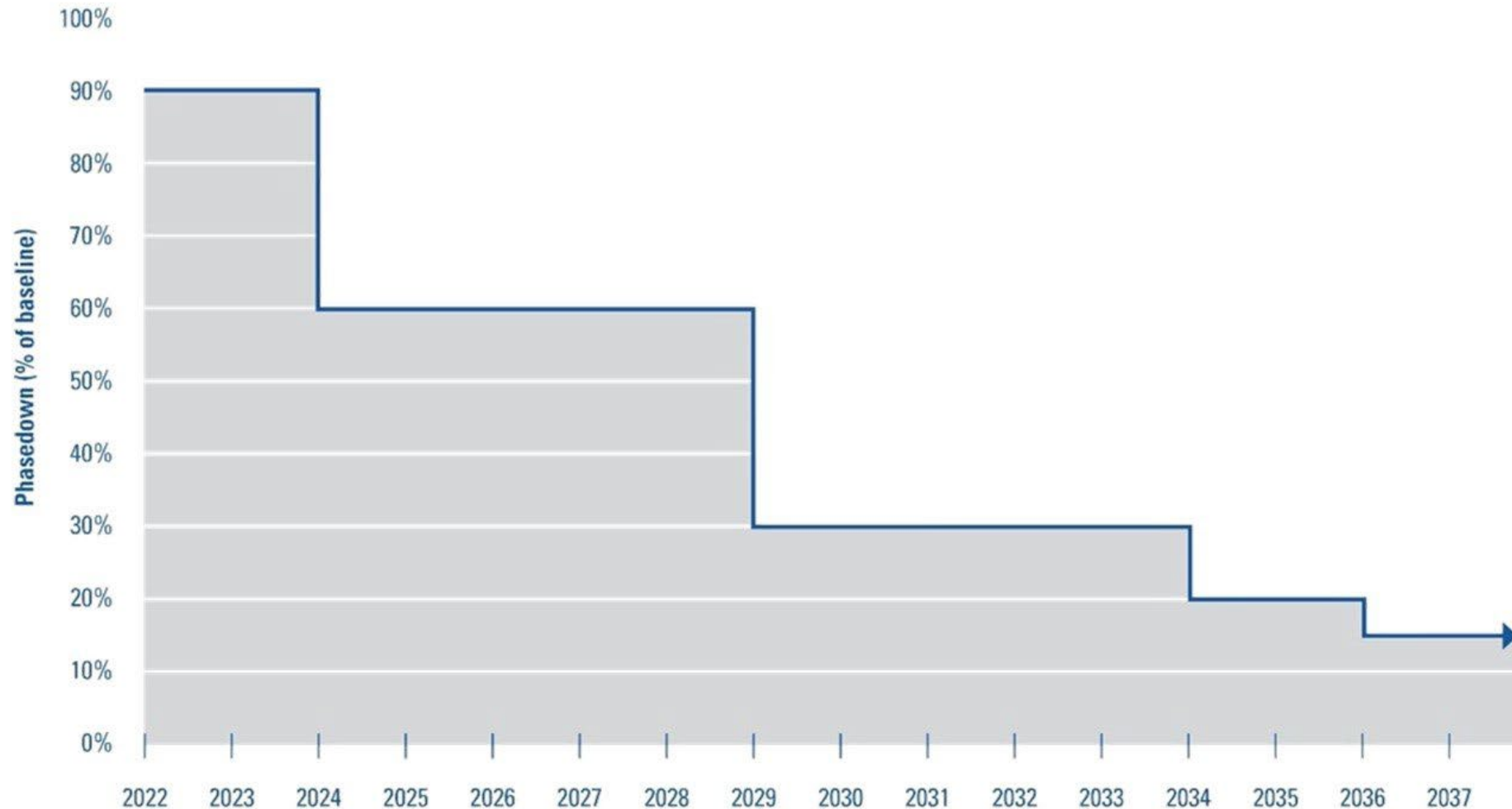


# The American Innovation & Manufacturing (AIM) Act

- Lists 18 HFCs as regulated substances
- Phases down HFC production and consumption by 85% from historical baseline levels by 2036
- The AIM Act authorizes EPA to address HFCs in three main ways:
  - Phase down HFC production and consumption, including import, through an allowance allocation and trading program
  - Promulgate certain regulations for purposes of maximizing reclamation and minimizing releases of HFCs and their substitutes from equipment
  - Facilitate sector-based transitions to next-generation technologies through sector-based restrictions

# HFC Allowance Allocation program

Illustrates the HFC Production and Consumption Phasedown schedule outlined in the AIM Act



# HFC Allowance Allocation program

- EPA issues allowances to importers and producers of bulk HFCs, as well as entities that use HFCs in six applications listed in the AIM Act
- Allowances are necessary for producing or importing bulk HFCs:
  - **Importing bulk HFCs requires expending consumption allowances**
  - Producing HFCs requires expending both production and consumption allowances
  - Application-specific allowances may also be used to produce or import HFCs for use in the six applications (e.g., metered dose inhalers) listed in the AIM Act
  - Allowance holders are listed at: <https://www.epa.gov/climate-hfcs-reduction/hfc-allowances>

# What's a bulk HFC?

- Under EPA's final rule, *bulk* means a regulated substance (i.e., an HFC listed under the AIM Act) of any amount that is in a container for the transportation or storage of that substance, such as cylinders, drums, ISO tanks, and small cans. A regulated substance that must first be transferred from a container to another container, vessel, or piece of equipment in order to realize its intended use is a bulk substance
- **Not** determined by size or weight, e.g., an AC recharge kit is a bulk substance because the contents must first be transferred to realize its intended use

## Examples of Bulk Containers

Service Cans



340 g – 1 kg

Drums



30 – 250 kg

Disposable/Non-refillable  
Cylinders



3.4 – 22.7 kg

Ton Tanks\*



700 – 950 kg

Refillable Cylinders



9 – 60 kg

ISO Tank Containers\*



18 – 20 MT

\* These containers are generally refillable.

# What is required for imports: allowances and documents

- Since January 1, 2022, allowances are required to import:
  - Any amount of **bulk** HFCs, including heels (i.e., residual amounts in containers), with limited exceptions
  - Used, reclaimed and/or recycled HFCs that are imported for any purpose except for destruction
  - HFC imports classified as U.S. goods returned
  - HFC imports into Foreign Trade Zones
- Reporting is required
- Imports that do not require allowances, but do require prior notification to EPA:
  - Prior approval from EPA, called a non-objection notice
    - Virgin HFCs intended to be transformed
    - Used HFCs intended to be destroyed
  - Notification to EPA of transshipments prior to leaving the foreign port upon export, as well as after leaving the U.S. upon re-export
    - HFCs that are transhipped, i.e., do not enter U.S. commerce and are exported within six months of import

**Note:** An HFC contained in a manufactured product such as an appliance, an aerosol can, or a foam is not a bulk substance.

# Administrative consequences

- Administrative consequences are allowance adjustments issued when EPA identifies certain activities occurred, such as:
  - Submitting false, inaccurate, or misleading data (e.g., wrong HTS codes)
  - Importing HFCs without expending the required number of allowances
  - Failing to report required information
- EPA can retire, revoke, or withhold allowances, or ban a company from receiving, transferring, or conferring allowances and EPA can also apply a premium
- More information can be found at:
  - <https://www.epa.gov/climate-hfcs-reduction/administrative-consequences-under-hfc-allocation-rule>
  - <https://www.federalregister.gov/d/2021-21030/p-602>

# “HFC” Government Agency Program Code

in PG01 Record of Message Set

# How to file under the “HFC” code

## Since January 2024

- “HFC” program code specifically *for bulk HFC imports*.
  - Tips for Filing for HFCs: <https://www.cbp.gov/document/fact-sheets/ace-tips-filing-epa-hfcs>

# HTS codes for HFCs: EH2 “Required” flags

HTS code	Description	Flag
2903.41.10.00	Trifluoromethane (HFC-23)	EH2
2903.42.10.00	Difluoromethane (HFC-32)	EH2
2903.44.10.10	1,1,1,2,2-Pentafluoroethane (HFC-125)	EH2
2903.44.10.20	1,1,1-Trifluoroethane (HFC-143a)	EH2
2903.44.10.30	1,1,2-trifluoroethane (HFC-143)	EH2
2903.46.10.00	1,1,1,2,3,3,3-Heptafluoropropane (HFC-227ea), 1,1,1,2,2,3-hexafluoropropane (HFC-236cb), 1,1,1,2,3,3-hexafluoropropane (HFC-236ea) and 1,1,1,3,3,3-hexafluoropropane (HFC-236fa)	EH2
2903.47.10.00	1,1,1,3,3-Pentafluoropropane (HFC-245fa) and 1,1,2,2,3-pentafluoropropane (HFC-245ca)	EH2
2903.48.00.00	1,1,1,3,3-Pentafluorobutane (HFC-365mfc) and 1,1,1,2,2,3,4,5,5,5-decafluoropentane (HFC-4310mee)	EH2
3827.31.00.00	Containing substances of subheadings 2903.41 to 2903.48	EH2
3827.61.00.00	Containing 15% or more by mass of 1,1,1-trifluoroethane (HFC-143a)	EH2
3827.62.00.00	Other, not included in the subheading above, containing 55% or more by mass of pentafluoroethane (HFC- 125) but not containing unsaturated fluorinated derivatives of acyclic hydrocarbons (HFOs)	EH2
3827.63.00.00	Other, not included in the subheadings above, containing 40% or more by mass of pentafluoroethane (HFC-125)	EH2
3827.64.00.00	Other, not included in the subheadings above, containing 30% or more by mass of 1,1,1,2-tetrafluoroethane (HFC-134a) but not containing unsaturated fluorinated derivatives of acyclic hydrocarbons (HFOs)	EH2
3827.65.00.00	Other, not included in the subheadings above, containing 20% or more by mass of difluoromethane (HFC-32) and 20% or more by mass of pentafluoroethane (HFC-125)	EH2
3827.68.00.00	Other, not included in the subheadings above, containing substances of subheadings 2903.41 to 2903.48	EH2

“EH2” means that filing the PGA data is required and disclaims are not allowed, because the goods under these HTS codes are regulated HFCs. See this guidance document for more details: <https://www.cbp.gov/document/guidance/agency-tariff-code-agency-program-cross-reference>

# HTS codes for HFCs: EH1 “May be Required” flags

HTS code	Description	Flag
2903.43.10.00	Fluoromethane (HFC-41), 1,2-difluoroethane (HFC-152) and 1,1-difluoroethane (HFC-152a)	EH1
2903.45.10.00	1,1,1,2-Tetrafluoroethane (HFC-134a) and 1,1,2,2-tetrafluoroethane (HFC-134)	EH1
2903.49.00.00	Other	EH1
3827.11.00.00	Containing chlorofluorocarbons (CFCs), whether or not containing hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs) or hydrofluorocarbons (HFCs)	EH1
3827.12.00.00	Containing hydrobromofluorocarbons (HBFCs)	EH1
3827.13.00.00	Containing carbon tetrachloride	EH1
3827.14.00.00	Containing 1,1,1-trichloroethane (methyl chloroform)	EH1
3827.20.00.00	Containing bromochlorodifluoromethane (Halon-1211), bromotrifluoromethane (Halon-1301) or dibromotetrafluoroethanes (Halon-2402)	EH1
3827.32.00.00	Other, containing substances of subheadings 2903.71 to 2903.75	EH1
3827.39.00.00	Other	EH1
3827.40.00.00	Containing methyl bromide (bromomethane) or bromochloromethane	EH1
3827.51.00.00	Other	EH1
3827.59.00.00	Other	EH1
3827.69.00.00	Other	EH1
3827.90.90.00	Other	EH1

“EH1” means that filing the PGA data may be required; disclaim code A may be allowed if the goods are not a bulk HFC.

See this guidance document for more details: <https://www.cbp.gov/document/guidance/agency-tariff-code-agency-program-cross-reference>

# Example of common HFC blends by ASHRAE Number

ASHRAE No.	HTS code	HTS Description	Flag
<b>R-508A</b>	3827.51.00.00	Containing trifluoromethane (HFC-23) or perfluorocarbons (PFCs) but not containing chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs)	EH2
<b>R-404A R-507A</b>	3827.61.00.00	Containing 15% or more by mass of 1,1,1-trifluoroethane (HFC-143a)	EH2
<b>R-421A R-422D</b>	3827.62.00.00	Other, not included in the subheading above, containing 55% or more by mass of pentafluoroethane (HFC- 125) but not containing unsaturated fluorinated derivatives of acyclic hydrocarbons (HFOs)	EH2
<b>R-407A R-410A R-452A</b>	3827.63.00.00	Other, not included in the subheadings above, containing 40% or more by mass of pentafluoroethane (HFC-125)	EH2
<b>R-407C</b>	3827.64.00.00	Other, not included in the subheadings above, containing 30% or more by mass of 1,1,1,2-tetrafluoroethane (HFC-134a) but not containing unsaturated fluorinated derivatives of acyclic hydrocarbons (HFOs)	EH2
<b>R-448A R-449A</b>	3827.65.00.00	Other, not included in the subheadings above, containing 20% or more by mass of difluoromethane (HFC-32) and 20% or more by mass of pentafluoroethane (HFC-125)	EH2
<b>R-450A R-452B R-454B R-513A</b>	3827.68.00.00	Other, not included in the subheadings above, containing substances of subheadings 2903.41 to 2903.48	EH2

# Filing HFC imports – PGA Message Set, DIS

1. **Program Code.** Use HFC Government Agency Program Code within the PG01 record and the electronic image indicator
2. **HTS Code.** File imports of bulk HFC using one of the HTS codes listed
3. **Entry/Certified from Summary.** File with Entry (Cargo Release) or Entry Summary Certified for Cargo Release. You must file 10 days before arrival for ocean shipments and 5 days before arrival for all other modes of transit
4. **DIS upload.** Upload a copy of the “certificate of analysis” (CoA) to the Document Image System (DIS) if a physical CoA document is not physically accompanying the shipment
  - Special DIS uploads. If a special import circumstance applies, you must upload to DIS:
    - EPA-issued non-objection notice (importing bulk HFCs for transformation or destruction)
    - EPA-issued confirmation notice for transshipments (transshipments)

See the filing tip sheet for more details: <https://www.cbp.gov/document/fact-sheets/ace-tips-filing-epa-hfcs>

# The data you need – chemical, weight and container

For each bulk HFC or blend being imported, the PGA message set requires that the following be provided:

## Chemical Identifier - ASHRAE or CAS number(s)

- “Neat” HFCs may be identified by their ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) number or CAS (Chemical Abstract Service) number
- Standard blends may have an ASHRAE number, and all blends may be represented by the CAS# of each individual component and the % of total mass it represents
- For each HFC or blend, an importer must provide *either* the ASHRAE number *or* the CAS number(s) and associated % of total mass

## Weight

- The chemical’s net weight in kilograms

## Container Number

- An identifier of the container in which the HFC/blend is housed

See the following slides and the CATAIR for more details.

# Examples: Reporting by ASHRAE vs. CAS

- When importing a “neat” HFC such as HFC-134a, an importer must
  - Either provide the ASHRAE #, e.g. R-134a
  - Or provide the CAS # and composition, e.g. CAS: 811-97-2, comp: 100%
- When importing a standard blend such as R-410A, an importer must:
  - Either provide the ASHRAE #, e.g. R-410A
  - Or provide the CAS # and composition, e.g. CAS: 75-10-5, comp: 50%; CAS: 354-33-6, comp: 50%
- When importing a non-standard blend (i.e. one without a listed ASHRAE number in the tip sheet), an importer must:
  - Provide the CAS # and percent composition (by weight) of each HFC component

See the following slides and the CATAIR for more details.

# The data you need – ASHRAE Numbers

PG Record	Description
01	Commercial Description of the Shipment
PG01	Government Agency and Program ("EPA" & "HFC")
<b>PG07</b>	<b>The American Society of Heating, Refrigerating and Air-Conditioning Engineers number (ASHRAE #)</b>
PG19	Entity Role (Importer), Importer ID, Importer Name, and Importer Address 1
PG20	Importer Address Line 2, Apartment/Suite, City, State, and Zip/Postal Code
PG21	Importer Point of Contact
PG55	Identifies Entity from the Previous PG19, PG20, and PG21 Group as having Additional Roles.
PG22	Certification (TSCA positive certification)
PG27	Container Number
PG29	Net Weight

See the following slides and the CATAIR for more details.

# The data you need – CAS Numbers

PG Record	Description
01	Commercial Description of the Shipment
PG01	Government Agency and Program ("EPA" & "HFC")
<b>PG02</b>	<b>Chemical Abstracts Service Registry Numbers (CAS #s)</b>
<b>PG04</b>	<b>Percent Composition (when reporting using CAS #s)</b>
PG19	Entity Role (Importer), Importer ID, Importer Name, and Importer Address 1
PG20	Importer Address Line 2, Apartment/Suite, City, State, and Zip/Postal Code
PG21	Importer Point of Contact
PG55	Identifies Entity from the Previous PG19, PG20, and PG21 Group as having Additional Roles.
PG22	Certification (TSCA positive certification)
PG27	Container Number
PG29	Net Weight

See the following slides and the CATAIR for more details.

# Filing HFC imports – DIS

## Document Image System Labels and TAGs:

- EPA\_CERTIFICATE\_OF\_ANALYSIS, EPA09: A copy of the “certificate of analysis” for the gas
- EPA\_NON\_OBJECTION\_NOTICE, EPA07: EPA-issued Non-Objection Notice is required if the HFC is being imported for transformation or destruction
- EPA\_CONFIRMATION\_NOTICE\_TRANSHIPMENT, EPA10: EPA-issued confirmation notice is required for transhipments
- Please see [Appendix A of the DIS Implementation Guide](#) for more details

# Filings, Responses

- Complete/Correct filing & importer has sufficient allowances → “may proceed”
- If not → “**reject**” with specific error message on what failed
  - Common reasons for rejected filing:
    - Data is input incorrectly (e.g. the filing contains an invalid CAS number or ASHRAE number)
    - Entry lists an importer of record number that is not associated with an HFC allowance holder
    - Importer does not have sufficient allowances to make the import
- **Foreign Trade Zones (FTZs)** – Type 06 Entry Filings like all other EPA programs except V&E. ***Please contact us if you plan to import bulk HFCs through FTZs***
- **Failure to File.** In addition to administrative consequences, failure to file correctly may lead to referrals to EPA’s Office of Enforcement and Compliance Assurance

# 2023 Final Technology Transitions Rule – Overview

- Published October 24, 2023, [88 FR 73098](#)
- Restricts the use of certain HFCs in new equipment in over 40 subsectors across the aerosol, foam, and refrigeration, air conditioning, and heat pump (RACHP) sectors
- Requires labeling
- Requires annual reporting
- Establishes a process for responding to future petitions



# 2023 Final Technology Transitions rule – restrictions

- Restricts the manufacture and import of new ***products*** that use HFCs above a specified GWP threshold
- Prohibits the sale, distribution, and export of non-compliant ***products*** after three years
- Prohibits installation of new RACHP ***systems*** that use HFCs above a specified threshold
- No restrictions on manufacture, import, sale, distribution, or export of ***components*** used to repair existing RACHP systems



This rule does not restrict the continued use of any existing products or RACHP systems

A product or system may be serviced and repaired throughout its useful life; this includes replacing components, as needed

# Technology Transitions requirements: key takeaways

- **Prohibitions:** Products and specified components with HFCs above the GWP-limit (e.g., HFC-134a) cannot be imported after the compliance date for the subsector
- **Labeling:** Products and specified components must be properly labeled for import starting on the same date as the import restriction
- **Reporting:** Importers of products and specified components must submit a report annually to the EPA, first report due March 31, 2026
- **Filing with Customs:** Providing details on product and HFC or alternative in cargo description can help to reduce potential unnecessary delays with reviewing your shipment and clearing customs
  - Example: A cargo description that says you are shipping a window air conditioner using R-290 is better than just stating “refrigerant” or “AC”

# Resources

- Fact sheet for importers of bulk HFCs:
  - <https://www.epa.gov/climate-hfcs-reduction/final-rule-phasedown-hydrofluorocarbons-establishing-allowance-allocation>
- Tips sheet for filing HFC imports in ACE:
  - <https://www.cbp.gov/document/fact-sheets/ace-tips-filing-epa-hfcs>
- EPA supplemental CATAIR guidelines:
  - <https://www.cbp.gov/document/forms/epa-supplemental-catair-guidelines>
- HFC phasedown website:
  - <https://www.epa.gov/climate-hfcs-reduction>
- Technology Transitions website:
  - <https://www.epa.gov/climate-hfcs-reduction/technology-transitions-program>

If you have questions, please  
contact,  
[HFCAllocation@epa.gov](mailto:HFCAllocation@epa.gov)

# Questions

# Sample filing – ASHRAE

Sample Reporting for American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Number

[illegible]

# Sample filing – CAS Number/Single Component

### Sample Reporting for CAS Number/Single Component

[illegible]

# Sample filing – Blend

## Sample Reporting for CAS Number/Blend

[illegible]

# 2025 Restrictions – Aerosols

Subsector	Global Warming Potential Limit or Prohibited Substances	Manufacture and Import Compliance Date <sup>1</sup>
Consumer aerosol products	150	January 1, 2025

# 2025 Restrictions - Foams

Subsector	Global Warming Potential Limit or Prohibited Substances	Manufacture and Import Compliance Date <sup>1</sup>
Polyurethane <sup>3</sup> (rigid, flexible, integral skin, laminated boardstock)	150	January 1, 2025
Polystyrene extruded boardstock and billet and extruded sheet	150	January 1, 2025
Phenolic insulation board and bunstock	150	January 1, 2025
Polyisocyanurate laminated boardstock	150	January 1, 2025
Polyolefin	150	January 1, 2025

\*These tables are for informational purposes only and should not be relied on for compliance purposes. Please refer to 40 CFR Part 82, Subpart B for full details.

1. Sale, distribution, and export of these products is prohibited three years after the manufacture and import compliance date.
3. Includes blown foam, products incorporating blown foam, and pre-blended polyol products. Excludes composite structural preformed polyurethane foam for trailer use and for marine use.

2025 Restrictions – Refrigeration, AC, and Heat Pumps		
Subsector	Global Warming Potential Limit or Prohibited Substances	Manufacture and Import Compliance Date
Stationary residential and light commercial air conditioning and heat pumps (e.g., window units, portable room air conditioning)	700	January 1, 2025
Residential dehumidifiers	700	January 1, 2025
Household refrigerators and freezers	150	January 1, 2025
Vending machines	150	January 1, 2025
Motor vehicle air conditioning – light-duty passenger vehicles	150	Model Year 2025
Retail food - refrigeration stand-alone units	150	January 1, 2025
Chillers (as a stand-alone product) - comfort cooling	700	January 1, 2025
Refrigerated transport - intermodal containers with refrigerant temperature entering the evaporator equal to or above -50 °C (-58 °F)	700	January 1, 2025
Refrigerated transport – road self-contained products	See rule for list of prohibited substances	January 1, 2025
Refrigerated transport – marine self-contained products	See rule for list of prohibited substances	January 1, 2025