

TITLE 7 NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DIVISION OF AIR QUALITY

PROPOSED REGULATION

1151 Prohibitions on Use of Certain Hydrofluorocarbons in Specific End-Uses

3/1/2020

1.0 Purpose

1.1 This regulation establishes the prohibitions and requirements for the use and manufacture of hydrofluorocarbons in the State of Delaware according to their specific end usage (including air conditioning and refrigeration equipment, aerosol propellants, and foam end-uses) and adopts specific United States Environmental Protection Agency Significant New Alternatives Policy Program prohibitions. This regulation is designed to support greenhouse gas emission reductions in the State of Delaware.

2.0 Applicability

2.1 This regulation applies to any person who sells, offers for sale, installs, uses, or manufactures in the State of Delaware, any substance used in end-uses listed in Section 6.0.

2.2 Substances used in end-uses listed in Section 7.0 are exempt from the prohibitions covered in this regulation.

2.3 Severability. Each section of this regulation shall be deemed severable, and in the event that any provision of this regulation is held to be invalid, the remainder of this regulation shall continue in full force and effect.

3.0 Definitions

The following terms, when used in this regulation, shall have the following meanings unless the context clearly indicates otherwise. Terms used but not defined herein shall have the meanings given to them in 7 Del. C. Chapter 60, 7 DE Admin. Code 1101 or the Clean Air Act as amended in 1990, in that order of:

“Aerosol Propellant” means a compressed gas that serves to dispense the contents of an aerosol container when the pressure is released.

“Air Conditioning Equipment” means chillers, both centrifugal chillers and positive displacement chillers, intended for comfort cooling of occupied spaces.

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“**Bunstock or bun stock**” means a large solid box-like structure formed during the production of polyurethane, polyisocyanurate, phenolic, or polystyrene insulation.

“**Capital Cost**” means an expense incurred in the production of goods or in rendering services including but not limited to the cost of engineering, purchase, and installation of components and/or systems, and instrumentation, and contractor and construction fees.

“**Centrifugal Chiller**” means air conditioning equipment that utilizes a centrifugal compressor in a vapor-compression refrigeration cycle typically used for commercial comfort air conditioning. Centrifugal chiller in this definition is a chiller intended for comfort cooling and does not include cooling for industrial process cooling and refrigeration.

“**Cold Storage Warehouse**” means a cooled facility designed to store meat, produce, dairy products, and other products that are delivered to other locations for sale to the ultimate consumer.

“**Component**” means a part of a refrigeration system, including but not limited to condensing units, compressors, condensers, evaporators, and receivers; and all of its connections and subassemblies, without which the refrigeration system will not properly function or will be subject to failures.

“**Cumulative Replacement**” means the addition of or change in multiple components within a three-year period.

“**Effective Date**” or “**Effective Date of Prohibition**” means date after which the prohibitions provided in Section 6.0 go into effect.

“**End-use**” means processes or classes of specific applications within industry sectors, including but not limited to those listed in Section 6.0.

“**Flexible Polyurethane**” means a non-rigid synthetic foam containing polymers created by the reaction of isocyanate and polyol, including but not limited to that used in furniture, bedding, and chair cushions.

“**Foam**” means a product with a cellular structure formed via a foaming process in a variety of materials that undergo hardening via a chemical reaction or phase transition.

“**Foam Blowing Agent**” means a substance used to produce the product with a cellular structure formed via a foaming process in a variety of materials that undergo hardening via chemical reaction or phase transition.

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“Global Warming Potential (GWP)” means a measure of the radiative efficiency (heat-absorbing ability) of a particular gas relative to that of carbon dioxide (CO₂) after taking into account the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO₂. Global warming potentials used in this Regulation are consistent with the values used in the Intergovernmental Panel on Climate Change, Fourth Assessment Report.

“Household Refrigerators and Freezers” means refrigerators, refrigerator-freezers, freezers, and miscellaneous household refrigeration appliances intended for residential use. For the purposes of this regulation, “household refrigerators and freezers” does not include “household refrigerators and freezers - compact”, or “household refrigerators and freezers - built-in.”

“Household Refrigerators and Freezers - Compact” means any refrigerator, refrigerator-freezer or freezer intended for residential use with a total refrigerated volume of less than 7.75 cubic feet (220 liters).

“Household Refrigerators and Freezers - Built-in” means any refrigerator, refrigerator-freezer or freezer intended for residential use with 7.75 cubic feet or greater total volume and 24 inches or less depth not including doors, handles, and custom front panels; with sides which are not finished and not designed to be visible after installation; and that is designed, intended, and marketed exclusively to be: installed totally encased by cabinetry or panels that are attached during installation; securely fastened to adjacent cabinetry, walls or floor; and equipped with an integral factory-finished face or accept a custom front panel.

“Hydrofluorocarbons” means a class of greenhouse gases that are saturated organic compounds containing hydrogen, fluorine, and carbon.

“Integral Skin Polyurethane” means a synthetic self-skinning foam containing polyurethane polymers formed by the reaction of an isocyanate and a polyol, including but not limited to that used in car steering wheels and dashboards.

“Manufacturer” means any person, firm, association, partnership, corporation, governmental entity, organization, or joint venture that produces any product that contains or uses hydrofluorocarbons or is an importer or domestic distributor of such a product.

“Metered Dose Inhaler,” or “Medical Dose Inhaler,” or “MDI” means a device that delivers a measured amount of medication as a mist that a patient can inhale, typically used for bronchodilation to treat symptoms of asthma, chronic obstructive pulmonary disease (COPD), chronic bronchitis, emphysema, and other respiratory illnesses. An MDI consists of a pressurized canister of medication in a case with a mouthpiece.

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“Miscellaneous Residential Refrigeration Appliance” means a residential refrigeration appliance smaller than a refrigerator, refrigerator-freezer, or freezer; and which includes coolers, cooler compartments, and combination cooler refrigeration or cooler freezer products.

“Motor-bearing” means refrigeration equipment containing motorized parts, including compressors, condensers, and evaporators.

“New” means products or equipment that are manufactured after the effective date of this regulation or equipment first installed for an intended purpose with new or used components after the effective date of this regulation, expanded after the effective date of this regulation, to handle an expanded cooling load by the addition of components in which the capacity of the system is increased, including refrigerant lines, evaporators, compressors, and condensers, or replaced or cumulatively replaced after the effective date of this regulation, such that the capital cost of replacing or cumulatively replacing components exceeds 50% of the capital cost of replacing the whole system.

“Phenolic Insulation Board” means phenolic insulation including but not limited to that used for roofing and wall insulation.

“Polyolefin” means foam sheets and tubes made of polyolefin.

“Polystyrene Extruded Boardstock and Billet (XPS)” means a foam formed from predominantly styrene monomer and produced on extruding machines in the form of continuous foam slabs which can be cut and shaped into panels used for roofing, walls, and flooring.

“Polystyrene Extruded Sheet” means polystyrene foam including that used for packaging. It is also made into food-service items, including hinged polystyrene containers (for "take-out" from restaurants); food trays (meat and poultry) plates, bowls, and retail egg containers.

“Positive Displacement Chiller” means vapor compression cycle chillers that use positive displacement compressors, typically used for commercial comfort air conditioning. Positive displacement chiller in this definition is a chiller intended for comfort cooling and does not include cooling for industrial process cooling and refrigeration.

“Refrigerant” or “Refrigerant Gas” means any substance, including blends and mixtures, which is used for heat transfer purposes.

“Refrigerated Food Processing and Dispensing Equipment” means retail food refrigeration equipment that is designed to process food and beverages dispensed via a nozzle that are intended for immediate or near-immediate consumption, including but not limited to chilled and frozen beverages, ice cream, and whipped

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cream. This end use excludes water coolers, or units designed solely to cool and dispense water.

“**Refrigeration Equipment**” means any stationary device that is designed to contain and use refrigerant gas, including but not limited to retail or commercial refrigeration equipment, household refrigeration equipment, and cold storage warehouses.

“**Remote Condensing Units**” means retail refrigeration equipment or units that have a central condensing portion and may consist of compressor(s), condenser(s), and receiver(s) assembled into a single unit, which may be located external to the sales area. The condensing portion (and often other parts of the system) is located outside the space or area cooled by the evaporator. Remote condensing units are commonly installed in convenience stores, specialty shops (e.g., bakeries, butcher shops), supermarkets, restaurants, and other locations where food is stored, served, or sold.

“**Residential use**” means use by a private individual of a substance, or a product containing the substance, in or around a permanent or temporary household, during recreation, or for any personal use or enjoyment. Use within a household for commercial or medical applications is not included in this definition, nor is use in automobiles, watercraft, or aircraft.

“**Retail Food Refrigeration**” or “**Commercial Refrigeration**” means equipment designed to store and display chilled or frozen goods for commercial sale including but not limited to stand-alone units, refrigerated food processing and dispensing equipment, remote condensing units, supermarket systems, and vending machines.

“**Retrofit**” means to convert a system from one refrigerant to another refrigerant. Retrofitting includes the conversion of the system to achieve system compatibility with the new refrigerant and may include, but is not limited to, changes in lubricants, gaskets, filters, driers, valves, O-rings, or system components.

“**Rigid Polyurethane and Polyisocyanurate Laminated Boardstock**” means laminated board insulation made with polyurethane or polyisocyanurate foam, including that used for roofing and wall insulation.

“**Rigid Polyurethane Appliance Foam**” means polyurethane insulation foam in household appliances.

“**Rigid Polyurethane Commercial Refrigeration and Sandwich Panels**” means polyurethane insulation for use in walls and doors, including that used for commercial refrigeration equipment, and used in doors, including garage doors.

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“Rigid Polyurethane High-pressure Two-component Spray Foam” means a foam product that is pressurized 800-1600 pounds per square inch (psi) during manufacture; sold in pressurized containers as two parts (i.e., A-side and B-side); and is blown and applied in situ using high-pressure pumps to propel the foam components, and may use liquid blowing agents without an additional propellant.

“Rigid Polyurethane Low-pressure Two-component Spray Foam” means a foam product that is pressurized to less than 250 psi during manufacture; sold in pressurized containers as two parts (i.e., A-side and B-side); and are typically applied in situ relying upon a gaseous foam blowing agent that also serves as a propellant so pumps typically are not needed.

“Rigid Polyurethane Marine Flotation Foam” means buoyancy or flotation foam used in boat and ship manufacturing for both structural and flotation purposes.

“Rigid Polyurethane One-component Foam Sealants” means a foam packaged in aerosol cans that is applied in situ using a gaseous foam blowing agent that is also the propellant for the aerosol formulation.

“Rigid Polyurethane Slabstock and Other” means a rigid closed-cell foam containing urethane polymers produced by the reaction of an isocyanate and a polyol and formed into slabstock insulation for panels and fabricated shapes for pipes and vessels.

“Stand-alone Unit” means retail refrigerators, freezers, and reach-in coolers (either open or with doors) where all refrigeration components are integrated and, for the smallest types, the refrigeration circuit is entirely brazed or welded. These systems are fully charged with refrigerant at the factory and typically require only an electricity supply to begin operation.

“Stand-alone Low-Temperature Unit” means a stand-alone unit that maintains food or beverages at temperatures at or below 32°F (0 °C).

“Stand-alone Medium-Temperature Unit” means a stand-alone unit that maintains food or beverages at temperatures above 32°F (0 °C).

“Substance” means any chemical intended for use in the end-uses listed in Section 6.0.

“Supermarket Systems” means multiplex or centralized retail food refrigeration equipment systems designed to cool or refrigerate, which typically operate with racks of compressors installed in a machinery room and which includes both direct and indirect systems.

“Use” means any utilization of any substance, including but not limited to utilization in a manufacturing process or product in Delaware, consumption by the end-user

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in the State of Delaware, or in intermediate applications in the State of Delaware, such as formulation or packaging for other subsequent applications. For the purposes of this regulation, use excludes residential use, but it does not exclude manufacturing for the purpose of residential use.

“Vending Machines” means self-contained commercial food refrigeration equipment that dispense goods that must be kept hot, cold or frozen.

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4.0 Standards (Requirements)

4.1 Prohibitions

4.1.1 No person may sell, install, use or manufacture in the State of Delaware, any listed substance for use in any air conditioning, refrigeration, foam, or aerosol propellant end-use listed as prohibited in Section 6.0, and not exempt by Section 7.0.

4.1.2 Except where an existing system is retrofit, nothing in this regulation requires a person that acquired a product or equipment containing a prohibited substance prior to an effective date of the prohibition in Section 6.0 to cease use of that product or equipment. Products or equipment manufactured prior to the applicable effective date of the restrictions specified in Table 1 of subsection 6.1.1 of this regulation (including spray foam systems not yet applied on site) may be sold, imported, exported, distributed, installed, and used after the specified date of prohibition.

4.2 Disclosure Statement

4.2.1 As of the effective date of this regulation, any person who manufactures and/or sells in the State of Delaware, products or equipment in the air conditioning, refrigeration, foam, or aerosol propellant end-uses listed as prohibited in Section 6.0, must provide a written disclosure to the buyer, as follows.

4.2.1.1 For motor-bearing refrigeration and air-conditioning equipment that is neither factory-charged nor pre-charged with refrigerant, the required disclosure or label must state:

“This equipment is prohibited from using any substance on the “List of Prohibited Substances” for that specific end-use, in accordance with State regulations for hydrofluorocarbon.”

4.2.1.2 Except for products and equipment with existing labeling required by state building codes and safety standards which contain the information required in subsections 4.2.1.2.1 and 4.2.1.2.2, the disclosure or label for refrigeration and air-conditioning equipment that are factory-charged or pre-charged with a hydrofluorocarbon or hydrofluorocarbon blend should include:

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4.2.1.2.1 The date of manufacture; and

4.2.1.2.2 The refrigerant and foam blowing agent the product or equipment contains.

4.2.1.3 For foam products, the disclosure or label should include:

4.2.1.3.1 Alternative 1

4.2.1.3.1.1 The date of manufacture; and

4.2.1.3.1.2 The hydrofluorocarbon the product contains or the hydrofluorocarbon used to make the product.

4.2.1.3.2 Alternative 2

4.2.1.3.2.1 “Where sold, compliant with State HFC regulations.”

4.2.1.4 For aerosol propellants, the disclosure or label should include:

4.2.1.4.1 Alternative 1

4.2.1.4.1.1 The date of manufacture or a date code representing the date, shall be indicated on the label, lid, or bottom of the container. If the manufacturer uses a date code for any product, the manufacturer shall file an explanation of each code to the Department; and

4.2.1.4.1.2 The hydrofluorocarbon the product contains or the hydrofluorocarbon used to make the product, or a reference to a Safety Data Sheet (complying with 29 CFR 1910.1200 requirements), if the latter identifies the hydrofluorocarbon the product contains or the hydrofluorocarbon used to make the product.

4.2.1.4.2 Alternative 2

4.2.1.4.2.1 “Where sold, compliant with State HFC regulations.”

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5.0 [RESERVED]

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6.0 List of Prohibited Substances

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6.1 End-use and prohibited substances

6.1.1 The following table lists prohibited substance in specific end-uses and the effective date of prohibition, unless and exemption is provided for in Section 7.0.

Table 1. End-use and Prohibited substances		
End-use Category: Aerosol Propellants		
<u>End-use</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Aerosol Propellants</u>	<u>HFC-125, HFC-134a, HFC-227ea and blends of HFC-227ea and HFC 134a.</u>	<u>January 1, 2021</u>
End-use Category: Air Conditioning		
<u>End-use</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Centrifugal chillers (new)</u>	<u>FOR12A, FOR12B, HFC-134a, HFC-227ea, HFC-236fa, HFC245fa, R-125/134a/ 600a (28.1/70/1.9), R-125/ 290/134a/ 600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-423A, R-424A, R-434A, R438A, R-507A, RS-44 (2003 composition), THR-03.</u>	<u>January 1, 2024</u>
<u>Positive displacement chillers (new)</u>	<u>FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R125/ 134a/ 600a (28.1/70/1.9), R-125/ 290/ 134a/ 600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-424A, R-434A, R-437A, R438A, R-507A, RS-44 (2003 composition), SP34E, THR-03.</u>	<u>January 1, 2024</u>
End-use Category: Refrigeration		
<u>End-use</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Cold storage warehouses (new)</u>	<u>HFC-227ea, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R404A, R-407A, R-407B, R-410A, R-410B, R-417A, R-421A, R421B, R-422A, R-422B, R-422C, R-422D, R-423A, R-424A, R428A, R-434A, R-438A, R-507A, RS-44 (2003 composition).</u>	<u>January 1, 2023</u>
<u>Household refrigerators and freezers (new)</u>	<u>FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002</u>	<u>January 1, 2022</u>

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	<u>formulation), RS-44 (2003 formulation), SP34E, THR-03.</u>	
<u>Household refrigerators and freezers—compact (new)</u>	<u>FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03.</u>	<u>January 1, 2021</u>
<u>Household refrigerators and freezers—built in appliances (new)</u>	<u>FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03.</u>	<u>January 1, 2023</u>
<u>Supermarket Systems (Retrofit)</u>	<u>R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R428A, R-434A, R-507A</u>	<u>January 1, 2021</u>
<u>Supermarket Systems (New)</u>	<u>HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A.</u>	<u>January 1, 2021</u>
<u>Remote Condensing Units (Retrofit)</u>	<u>R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R428A, R-434A, R-507A.</u>	<u>January 1, 2021</u>
<u>Remote Condensing Units (New)</u>	<u>HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A.</u>	<u>January 1, 2021</u>
<u>Stand-Alone Units (Retrofit)</u>	<u>R-404A, R-507A.</u>	<u>January 1, 2021</u>
<u>Stand-Alone Medium-Temperature Units (New)</u>	<u>FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R407A, R-407B, R-407C, R-407F, R-410A, R-410B, R417A, R-421A, R-421B, R-422A, R-422B, R-422C, R422D, R-424A, R-426A, R-428A, R-434A, R-437A, R438A, R-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03.</u>	<u>January 1, 2021</u>
<u>Stand-Alone Low-Temperature Units (New)</u>	<u>HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A,</u>	<u>January 1, 2021</u>

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	<u>R-410B, R-417A, R-421A, R-421B, R422A, R-422B, R-422C, R-422D, R-424A, R-428A, R434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation).</u>	
<u>Refrigerated food processing and dispensing equipment (New)</u>	<u>HFC-227ea, KDD6, R-125/ 290/ 134a/ 600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation).</u>	<u>January 1, 2021</u>
<u>Vending Machines (Retrofit)</u>	<u>R-404A, R-507A.</u>	<u>January 1, 2021</u>
<u>Vending Machines (New)</u>	<u>FOR12A, FOR12B, HFC-134a, KDD6, R125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R407C, R-410A, R-410B, R-417A, R-421A, R-422B, R422C, R-422D, R-426A, R-437A, R-438A, R-507A, RS-24 (2002 formulation), SP34E.</u>	<u>January 1, 2022</u>
<u>End-use Category: Foams</u>		
<u>End-use</u>	<u>Prohibited Substances</u>	<u>Effective Date</u>
<u>Rigid Polyurethane and Polyisocyanurate Laminated Boardstock</u>	<u>HFC 134a, HFC 245fa, HFC 365mfc, and blends thereof.</u>	<u>January 1, 2021</u>
<u>Flexible Polyurethane</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof.</u>	<u>January 1, 2021</u>
<u>Integral Skin Polyurethane</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6.</u>	<u>January 1, 2021</u>
<u>Polystyrene Extruded Sheet</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6.</u>	<u>January 1, 2021</u>
<u>Phenolic Insulation Board and Bunstock</u>	<u>HFC-143a, HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof.</u>	<u>January 1, 2021</u>
<u>Rigid Polyurethane Slabstock and Other</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6.</u>	<u>January 1, 2021</u>
<u>Rigid Polyurethane Appliance Foam</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6.</u>	<u>January 1, 2021</u>

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<u>Rigid Polyurethane Commercial Refrigeration and Sandwich Panels</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6.</u>	<u>January 1, 2021</u>
<u>Polyolefin</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6.</u>	<u>January 1, 2021</u>
<u>Rigid Polyurethane Marine Flotation Foam</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6.</u>	<u>January 1, 2021</u>
<u>Polystyrene Extruded Boardstock and Billet (XPS)</u>	<u>HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel B, Formacel Z-6.</u>	<u>January 1, 2021</u>
<u>Rigid polyurethane (PU) high-pressure two-component spray foam</u>	<u>HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI.</u>	<u>January 1, 2021</u>
<u>Rigid PU low-pressure two-component spray foam</u>	<u>HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI.</u>	<u>January 1, 2021</u>
<u>Rigid PU one-component foam sealants</u>	<u>HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI.</u>	<u>January 1, 2021</u>

6.1.2 Proposed Modifications to List of Prohibited Substances

6.1.2.1 A person subject to the list of prohibited substances in Section 6.0 may request that the Department modifies the regulation to exclude hydrofluorocarbon blends in certain end-uses. The request shall contain the following information:

6.1.2.1.1 A detailed description of the end-use category for which the modification is requested; and

6.1.2.1.2 A demonstration that the U.S. EPA has approved the hydrofluorocarbon blend under the Significant New Alternatives Policy under section 7671(k) of the Clean Air Act or other persuasive rationale for modifying the Regulation.

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7.0 End-use and prohibited substances exemptions

7.1 The following table lists exemptions to the prohibitions in Section 6.0

Table 2. End-use and Prohibited exemptions		
<u>End-use category</u>	<u>Prohibited Substances</u>	<u>Acceptable Uses</u>
<u>Aerosol Propellants</u>	<u>HFC-134a.</u>	<u>Cleaning products for removal of grease, flux and other soils from electrical equipment; refrigerant flushes; products for sensitivity testing of smoke detectors; lubricants and freeze sprays for electrical equipment or electronics; sprays for aircraft maintenance; sprays containing corrosion preventive compounds used in the maintenance of aircraft, electrical equipment or electronics, or military equipment; pesticides for use near electrical wires, in aircraft, in total release insecticide foggers, or in certified organic use pesticides for which EPA has specifically disallowed all other lower-GWP propellants; mold release agents and mold cleaners; lubricants and cleaners for spinnerettes for synthetic fabrics; duster sprays specifically for removal of dust from photographic negatives, semiconductor chips, specimens under electron microscopes, and energized electrical equipment; adhesives and sealants in large canisters; document preservation sprays; FDA-approved MDIs for medical purposes; wound care sprays; topical coolant sprays for pain relief; and products for removing bandage adhesives from skin.</u>
<u>Aerosol Propellants</u>	<u>HFC-227ea and blends of HFC-227ea and HFC 134a.</u>	<u>FDA-approved MDIs for medical purposes.</u>
<u>Air Conditioning</u>	<u>HFC-134a.</u>	<u>Military marine vessels where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.</u>
<u>Air Conditioning</u>	<u>HFC-134a and R-404A.</u>	<u>Human-rated spacecraft and related support equipment where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.</u>

DRAFT – For deliberative purposes - for discussion only

<u>Foams – Except Rigid polyurethane (PU) spray foam</u>	<u>All substances.</u>	<u>Military applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2022.</u>
<u>Foams – Except Rigid polyurethane (PU) spray foam</u>	<u>All substances.</u>	<u>Space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2025.</u>
<u>Rigid polyurethane (PU) two- component spray foam</u>	<u>All substances.</u>	<u>Military or space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2025.</u>