PIMA PERFORMANCE BULLETIN

Regulations for the Manufacture of Insulation with Low-GWP Blowing Agents

Regulations in Canada and the U.S.

Canada and specific jurisdictions in the United States have adopted regulations that prohibit the manufacture and use of common building insulation products produced with blowing agents characterized as having high-global warming potential (GWP). These high-GWP blowing agents belong to a class of chemicals known as hydrofluorocarbons (HFCs), which have greater contributions to global warming than alternatives. Construction professionals should be familiar with the regulations that restrict HFCs in order to ensure that materials specified for projects are compliant with the restrictions.

Impacts to Building Insulation

For jurisdictions with effective regulations, foam building insulation products that are sold and installed within the jurisdiction must be manufactured with low-GWP blowing agent technology. Several product types like polyisocyanurate (polyiso) and expanded polystyrene (EPS) insulation already comply with these restrictions based on existing formulations as manufacturers adopted low-GWP solutions decades ago. For other foam insulation product types like extruded polystyrene (XPS) and spray polyurethane foam (SPF), manufacturers are required to implement new formulations in order to comply with the applicable restrictions.

Compliance Checklist

- ☐ Install products manufactured with low-GWP alternatives.
- ☐ Understand *low-GWP* versus *reduced-GWP*. Products sold as "reduced-GWP" may still contain HFCs or blends thereof.
- ☐ Be familiar with applicable restrictions and review sell-through provisions that may allow products manufactured prior to the restriction date to remain in commerce until installed.
- ☐ Do not "import" non-compliant products into jurisdictions where their import and use are restricted.

Several product types like polyisocyanurate (polyiso) and expanded polystyrene (EPS) insulation already comply with these restrictions based on existing formulations as manufacturers adopted low-GWP solutions decades ago.

Global Warming Potential (GWP):

GWP is a measure of a substance's ability to trap heat in the atmosphere. A substance that traps more heat will be assigned a higher GWP value and contribute more to global warming.

POLYISO

Surround yourself with the best.

Effective Dates of Restrictions

The table below summarizes by jurisdiction the dates on which the use restrictions (final or proposed) become effective for commonly-installed foam building insulation products. The installation of products manufactured with high-GWP blowing agents is prohibited after the dates listed below within the specified jurisdictions.

Table 1: Effective Dates for HFC Restrictions by Jurisdiction and Insulation Product Type
(Last Updated October 12, 2021)

	Polyisocyanurate (Polyiso)	Expanded Polystyrene (EPS)	Extruded Polystyrene (XPS)	Spray Polyurethane Foam (High-Pressure)
Jurisdiction	**COMPLIANCE STATUS**			
Canada	✓	✓	Prohibited January 1, 2021 (⁺GWP > 150)	Prohibited January 1, 2021 (⁺GWP > 150)
California	✓	✓	Prohibited January 1, 2021 (*HFCs)	Prohibited January 1, 2020 (#HFCs)
Colorado	✓	✓	Prohibited January 1, 2021 (*HFCs)	Prohibited January 1, 2021 (#HFCs)
Delaware	✓	✓	Prohibited September 1, 2021 (*HFCs)	Prohibited September 1, 2021 (#HFCs)
Maine	✓	✓	Prohibited January 1, 2022 (*HFCs)	Prohibited January 1, 2022 (#HFCs)
Maryland	✓	✓	Prohibited July 1, 2021 (*HFCs)	Prohibited July 1, 2021 (#HFCs)
Massachusetts	✓	✓	Prohibited July 1, 2021 (*HFCs)	Prohibited January 1, 2021 (#HFCs)
New Jersey	✓	✓	Prohibited January 1, 2021 (*HFCs)	Prohibited July 1, 2020 (#HFCs)
New York	✓	✓	Prohibited January 1, 2021 (*HFCs)	Prohibited January 1, 2021 (#HFCs)
Rhode Island *(proposed)*	✓	✓	Prohibited January 1, 2022 (*HFCs)	Prohibited January 1, 2022 (#HFCs)
Vermont	✓	✓	Prohibited January 1, 2022 (*HFCs)	Prohibited January 1, 2022 (#HFCs)
Virginia	✓	✓	Prohibited January 1, 2022 (*HFCs)	Prohibited January 1, 2022 (#HFCs)
Washington	✓	✓	Prohibited January 1, 2021 (*HFCs)	Prohibited January 1, 2020 (#HFCs)

Notes to Table 1:

⁺ As of January 1, 2021, it is prohibited for any person to manufacture a plastic foam or a rigid foam product in which an HFC set out in Table 4 of Schedule 1 is used as a foaming agent if the global warming potential of the foaming agent is greater than 150. The Canadian Ozone-depleting Substances and Halocarbon Alternatives Regulations are available at: https://laws-lois.justice.gc.ca/eng/regulations/SOR-2016-137/.

* The use of the following substances is prohibited: HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; and Formacel TI, B and Z-6.

The use of the following substances is prohibited: HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; and Formacel TI.

PIMA

For more than 30 years, the Polyisocyanurate Insulation Manufacturers Association (PIMA) has served as the voice of the rigid polyiso industry, proactively advocating for safe, cost-effective, sustainable, and energy-efficient construction. Organized in 1987, PIMA is an association of polyiso manufacturers and industry suppliers. Polyiso is one of North America's most widely-used and cost-effective insulation products.

PIMA produces performance bulletins to provide technical and industry information on key topics related to insulation performance. The resources provide the public with information that can be used to evaluate polyiso insulation products and compare their performance to other common insulation types. Industry professionals should review individual polyiso manufacturer resources for product-specific information.

For more information on polyisocyanurate insulation, visit www.polyiso.org

PIMA
POLYISOCYANURATE INSULATION MANUFACTURERS ASSOCIATION

ATLAS CONNECTING FUNCTION WITH FACILITY™ CARLISLE CONSTRUCTION MATERIALS Firestone Building Products

GAF IKO JM Johns Manville R-MAX SOPREMA