

## Flexible FAST™ Dual Tanks HFO Blowing Agent

As part of a continuing dedication to sustainability, Carlisle SynTec Systems is introducing Flexible FAST Dual Tanks that utilize an HFO blowing agent. HFO (hydrofluoroolefin) blowing agents are widely recognized as the next-generation environmentally friendly blowing agent, replacing their HFC (hydrofluorocarbon) predecessor.



### CLIMATE IMPACT ON BLOWING AGENTS

Although HFCs have replaced the majority of blowing agents in industrial countries, the Kyoto Protocol identified HFCs as industrial gases requiring emissions control because of their high global warming potential (GWP). Moving from an HFC to an HFO blowing agent is a critical step in minimizing the climate impact of the commercial roofing industry.

Looking at the climate impacts of different blowing agents, HFOs provide the most eco-friendly solution available. Some of the factors that determine the impact of blowing agents on our environment are flammability, ozone depleting potential (ODP), and GWP.

<b>HFC</b> (Dual Tanks from 2016-2020)	Not Flammable	Zero ODP	High GWP
<b>Water</b> (Flexible FAST Dual Cartridges, 5-Gallon Jugs, 15- & 20-Gallon Drums)	Not Flammable	Zero ODP	Low GWP
<b>HFO</b> (Dual Tanks from 2021 and Beyond)	Not Flammable	Zero ODP	Low GWP

Starting January 1, 2021, regulations requiring HFO blowing agents for any pressurized two-part urethane foams and adhesives will be set in place. These regulations will apply to Canada and select states in the U.S.; however, it is anticipated that the majority of the U.S. will adopt these regulations within the next few years.

#### United States Climate Alliance

- » As of October 2020, 24 member states + PR representing 55% of the U.S. population/60% of US GDP
- » Intent is to align state HFC regulations as closely as possible
- » HFC blowing agent regulations impact canisters utilizing 2-part urethane adhesive

#### Canada EPA Ruling

- » Published in 2017
- » Regulations specific to the manufacture of “a plastic foam or a rigid foam product”
- » Phase down; allows blends <150 GWP

### Kyoto Protocol

The Kyoto Protocol is an international agreement that aimed to manage and reduce carbon dioxide emissions and greenhouse gases. The Protocol was adopted at a conference in Kyoto, Japan, in 1997 and became international law on February 16, 2005.

## FEATURES AND BENEFITS

Carlisle's HFO Flexible FAST Dual Tanks provide an eco-friendly option that performs extremely well and offers additional benefits not associated with HFCs or water-blown products. The HFO blowing agent remains trapped inside millions of closed cells, positively impacting Flexible FAST Adhesive properties such as yield, adhesion, flammability, and resistance to water.

Other features and benefits include:

- » Green alternative, offering low GWPs and zero ODPs
- » Easier and more efficient splatter application; dispenses in a more uniform pattern
- » Improved coverage rates by up to 16% versus other canister based insulation and membrane adhesives
- » Improved rise and cell structure
- » Improved and more obvious string time



## Restrictions in the U.S. and Canada

	Restrictions are in Place	Restrictions are Approved	Restrictions are in Development
United States	California Colorado Massachusetts New Hampshire New Jersey New York Vermont	Maryland	Connecticut Hawaii Maine Nevada Oregon Pennsylvania Rhode Island, Texas Virginia
Canada		Alberta British Columbia Manitoba New Brunswick Newfoundland and Labrador Nova Scotia Ontario Prince Edward Island Quebec Saskatchewan	

## NOTE FOR SPECIFICATIONS

When specifying projects that utilize a two-component urethane adhesive, ensure that your selected insulation or membrane adhesive utilizes an HFO or water-based blowing agent that provides low GWPs and Zero ODPs.