

Frequently Asked Questions

F-gas Regulation, 3M™ Novec™ 1230 Fire Protection Fluid and the 3M™ Blue Sky™ Warranty

Q: What is the F-gas Regulation?

A: In March 2014, the European Parliament voted to support a European Commission proposal for a multifaceted strategy aimed at minimizing the climate impact of HFCs. The strategy includes cutting the use of hydrofluorocarbons (HFCs) 79% below average 2009-2012 CO₂ equivalent levels by 2030. Under the regulations, HFC producers/importers will be allocated a production/import quota for HFCs. Because the quota will be in CO₂ equivalent and HFCs sold into fire suppression have some of the highest global warming potentials (GWPs) relative to other sectors, this framework does not favor HFCs sold into fire suppression. Thus they are likely to be more severely impacted than HFCs sold into other sectors. HFC-227ea, HFC-125 and HFC-236fa are targeted in the overall scope of the regulation. HFC-23 will be prohibited from being placed on the market after January 1, 2016. Therefore, practical implications of the new ruling affect not just emission levels, but also the production and importation of HFCs.

Q: Is the overall construct of the regulation focused on use or emissions of HFCs?

A: A primary tenet of the F-gas Regulation is that every pound of an HFC produced or imported for use in the EU will ultimately be emitted; so, in order to reduce future emissions, the regulation needs to reduce the use of HFCs. Future reductions in the emissions of HFCs will predominantly be achieved by ramping down use of these potent greenhouse gases between 2015 and 2030 with a phase-down in production and import.

Q: What does the HFC cap and phase-down mean in practice for the fire suppression market?

A: Under the cap and phase-down, HFC-producers will be allocated a production/import quota for HFCs and will have difficult decisions to make. Because the quota will be in CO₂ equivalent and HFCs sold into the fire suppression market have some of the highest GWPs, this framework does not favor HFCs sold into fire suppression. For example, an HFC producer would consume the same percentage of a quota by making either one ton of HFC-227ea, three tons of HFC-245fa, or five tons of HFC-32. This dynamic will put a substantial amount of uncertainty on the future supply and cost of HFCs sold into fire suppression.

Given that fire suppression systems can easily be *in situ* for 20 or more years, any HFC-based system already installed or purchased over the next few years will likely be affected by the F-gas Regulation. So, suddenly, HFC-based fire suppression systems may not only be faced with immediate price consequences but also, as future supplies of HFCs are increasingly tightened, the future cost of refilling a discharged system may dramatically increase, and there may also be end-of-life costs when a system is ultimately decommissioned.

Q: But the F-gas Regulation only applies to member states of the EU – surely it doesn't have any impact on users outside that region?

A: In countries all over the world, there are existing or impending restrictions around the current and future use of HFCs, so while the F-gas Regulation is specific to the EU, it is an indicator of increasing concerns around HFCs. For example, there have now been multiple proposals to the Montreal Protocol on substances that deplete stratospheric ozone for a global HFC phase-down under the same treaty. In addition, the United States EPA has now proposed to de-list HFCs as acceptable substitutes to ozone depleting substances in some sectors.

Q: What are some of the other implications on the fire suppression sector?

A: HFC-23 Prohibition:

A prohibition for placing HFC-23 on the market starting in 2016.

Reporting Requirements:

Reporting is required for any import of fire protection equipment (systems and extinguishers) containing more than 100 tonnes of CO₂ equivalent HFCs. The report for 2014 imports is due to the Commission by March 31, 2015. Below are the approximate amounts of HFCs that would be equal to 100 tonnes of CO₂ equivalent based on the GWPs shown in Annex I.

HFC-227ea = 68 lbs. HFC-125 = 63 lbs. HFC-236fa = 22 lbs.
HFC-23 = 15 pounds

Labeling Requirements:

Labels on fire suppression equipment shall indicate the following information:

- a reference that the product or equipment contains fluorinated greenhouse gases or that its functioning relies upon such gases;
- the accepted industry designation for the fluorinated greenhouse gases concerned or, if no such designation is available, the chemical name;
- from 1 January 2017, the quantity expressed in weight and in CO₂ equivalent of fluorinated greenhouse gases contained in the product or equipment, or the quantity of fluorinated greenhouse gases for which the equipment is designed, and the global warming potential of those gases.

The information referred to in paragraphs (a), (b) and (c) above shall be included in instruction manuals for the products and equipment concerned. In the case of products and equipment that contain fluorinated greenhouse gases with a global warming potential of 150 or more this information shall also be included in descriptions used for advertising.



Q: What options are there for users wanting to move away from HFCs?

A: The fire suppression market already has cost-effective, proven substitutes available that help reduce greenhouse gas emission by >99%. These include fire suppression systems that use 3M™ Novec™ 1230 Fire Protection Fluid.

Q: DuPont offers a warranty similar to 3M, doesn't it?

A: No, 3M is the only organization offering a global warranty for its fire suppression agent. The DuPont® FM-200® Falcon Customer Protection Program provides a 20 year warranty for DuPont customers and is currently available in Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, the United Arab Emirates and Yemen. None of these countries are a member state of the EU and, therefore, would not be subject to the F-gas Regulation. DuPont does not offer the same warranty to the member states of the EU, or in any other region for that matter.

Q: What are the advantages of the 3M™ Blue Sky™ Warranty?

A: The 3M™ Blue Sky™ Warranty offers peace of mind to our global customers including those regions directly impacted by the F-gas Regulation. Specifically, the Blue Sky Warranty offers: 3M warrants, for a period of 20 years after original installation and subject to noted requirements, that 3M™ Novec™ 1230 Fire Protection Fluid, installed in an approved* fire suppression system, will not be restricted for use in fire protection due to its Ozone Depletion Potential (ODP) or Global Warming Potential (GWP) and is not targeted for phase-down by the Montreal Protocol, nor subject to the European F-gas regulations targeting the phase-down of production and import of HFCs into Europe; and will not be affected by U.S. EPA SNAP regulations which would render it either unacceptable or acceptable subject to narrow use limits.

Q: What is 3M™ Novec™ 1230 Fire Protection Fluid and what are its benefits?

A: 3M™ Novec™ 1230 Fire Protection Fluid is a next-generation HFC and halon replacement, designed to balance concerns for safety, performance and the environment. It has zero ozone-depletion potential, an atmospheric lifetime of just five days and a global warming potential of less than one. It is non-conductive, non-corrosive and quickly becomes a gas when discharged from a properly designed system. It is ideal for protecting sensitive components and other critical assets. Novec 1230 fluid leaves no residue and does not damage equipment or disrupt the working environment.

Q: But isn't Novec 1230 fluid another chemical clean extinguishing agent (CEA), just like HFC-227ea?

A: Not all clean extinguishing agents (CEAs) are the same. While they are both CEAs, HFC-227ea is an HFC, whereas Novec 1230 is not an HFC, but rather a fluoroketone and is not subject to current or expected legislation addressing global climate change.

Q: Where and how do people buy Novec 1230 fluid?

A: Fire suppression systems are available from select industry leading partners worldwide. A complete list of fire suppression system equipment manufacturers can be found at www.3M.com/novec1230fluid under "Where to Buy."

*Approved means the system or equipment complies with CEN 14520, CEA 4009, VDS 2381, UL 2166 or other third-party accreditations. Other accreditations must be agreed to by 3M in writing.

The 3M™ Novec™ Brand Family

The Novec brand is the hallmark for a variety of proprietary 3M products. Although each has its own unique formula and performance properties, all Novec products are designed in common to address the need for safe, effective, sustainable solutions in industry-specific applications. These include precision and electronics cleaning, heat transfer, fire protection, protective coatings, immersion cooling, advanced insulation media replacement solutions and several specialty chemical applications.

3M™ Novec™ Engineered Fluids • 3M™ Novec™ Aerosol Cleaners • 3M™ Novec™ 1230 Fire Protection Fluid • 3M™ Novec™ Electronic Grade Coatings • 3M™ Novec™ Electronic Surfactants • 3M™ Novec™ Dielectric Fluids

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