

EU F-Gas Regulation Guidance

Information Sheet 9: Solvents

Target audience for this Information Sheet

This information sheet is aimed at companies that manufacture, sell or use cleaning solvents containing HFCs.

1. Background

This guidance is for organisations affected by the 2014 EU F-Gas Regulation (517/2014). The F-Gas Regulation creates controls on the use and emissions of fluorinated greenhouse gases (F-Gases) including HFCs, PFCs and SF₆.

In the solvent sector, the F-Gas Regulation affects the use of HFCs as cleaning solvents. The 2014 EU F-Gas Regulation replaces the 2006 Regulation, strengthening all of the 2006 requirements and introducing a number of important new measures.

The F-Gas Regulation is an important piece of legislation that will result in significant reductions in the emissions of F-Gases. These are very powerful greenhouse gases, with global warming impacts that can be several thousand times higher than CO₂ (per kg of gas emitted). All EU Member States agree that it is important to reduce emissions of these gases.

This Information Sheet describes the requirements that apply to solvent products. Further guidance is available – see Information Sheet 30 for a full list and a glossary of terms.

Solvent Products: Compliance Checklist for EU F-Gas Regulation

Purchase of new solvent products

- ✓ **NEW:** take account of HFC phase down when selecting solvents
- ✓ **NEW:** new products containing HFC solvents must be labelled from 1st January 2015

End-of-life requirements

- ✓ Mandatory recovery of solvents by qualified technician

2. Sector description

Various industrial cleaning processes make use of fluorinated solvents. Historically there was significant use of CFC solvents (such as CFC 113) and HCFC solvents (such as HCFC 141b). During the phase out of ozone depleting substances there was a substantial shift away from fluorinated solvents, towards other organic solvents (e.g. ethers and alcohols) and “not-in-kind” technologies such as aqueous cleaning. A small residual market remains for HFC-based solvents, with HFC 4310mee being the main HFC-based product. HFC 365mfc is also used as a solvent. HFC solvents are often sold under trade names (such as Vertrel XF) and can be blended with other types of solvent.

3. Purchase of new solvent products

NEW: Impact of the HFC Phase Down on the manufacture of aerosols

The new F-Gas Regulation does not introduce any bans on the use of HFCs as solvents. However, when selecting a solvent you should consider the HFC phase down¹ that is a key feature of the 2014 F-Gas Regulation. This will reduce the quantity of HFCs that can be sold in the EU – by 2030 there will be an 80% cut in HFC supply. The phase down is likely to lead to an increase in the price of HFCs. It makes sense to always use solvents with the lowest practical GWP to minimise the future impact of the phase down².

New: Product Labelling

From January 1st 2015 all solvent products that contain F-Gases (including HFCs) shall not be placed on the market unless the F-Gases are identified with a label. The label shall indicate the following information:

- 1) A reference that the solvent contains F-Gases
- 2) The accepted industry designation for the F-Gas concerned or, if no such designation is available, the chemical name
- 3) From 1 January 2017, the quantity expressed in weight and in CO₂ equivalent of F-Gas contained in the solvent, and the global warming potential of the solvent

4. End-of-life requirements

Any F-Gas-based solvents (including HFCs) reaching end-of-life must be properly recovered. Recovery must be carried out by qualified technicians.

All recovered F-Gases can be either:

- a) Sent for destruction by incineration at a licenced waste facility
- b) Sent to a specialist plant that can re-process the old solvent to obtain properties identical to virgin fluid, to create “reclaimed solvent”
- c) Given a basic cleaning process, to create “recycled solvent”.

Given the HFC supply shortage that will be created by the phase down process, it is worth trying to send the old solvent for reclamation as it may have a good residual value. If the old solvent is too contaminated it cannot be reclaimed and must be sent for destruction. It is important not to mix different solvents in the same recovery container –this would render them unsuitable for reclamation.

Reclaimed solvents can be used in any solvent equipment. Recycled solvents must always be used with care as it may be slightly contaminated or of unknown composition.

¹ HFC phase down: see Information Sheet 28 for further details

² Low GWP alternatives to HFCs: see Information Sheet 29 for further details

5. Training Requirements

Technicians involved in recovery of solvents containing F-Gases need to hold either:

- Fraser Technology solvents F gas qualification, or
- A European qualification recognised under mutual recognition provisions.

Contact Fraser Cleaning Technology Ltd for more details:

Telephone: 01506 443 058 Email: sales@frasertech.co.uk Website: www.frasertech.co.uk

Training exemptions: trainees are exempt for up to 1 year, but they must work under the supervision of certificated personnel and must be enrolled on a relevant training course.

Gluckman Consulting
specialists in refrigeration and climate change

This Information Sheet has been prepared by Gluckman Consulting

in collaboration with the Defra (UK Department for Environment, Food and Rural Affairs) and Jacobs

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