

EU F-Gas Regulation Guidance

Information Sheet 1: Domestic Refrigeration

Target audience for this Information Sheet

This information sheet is aimed at organisations that purchase and use domestic refrigeration equipment. It is also useful for those organisations that manufacture, sell, maintain and dispose of domestic refrigeration equipment.

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 domestic refrigeration sector, the F-Gas Regulation affects the use of HFCs as refrigerants and as blowing agents for the insulation foam. 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 are 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 domestic refrigeration. Further guidance is available for other F-Gas users – see Information Sheet 30 for a full list and for a glossary of terms.

Domestic Refrigeration: Compliance Checklist for EU F-Gas Regulation

Purchase of new equipment

- ✓ **NEW:** ban on the use of HFCs with a GWP above 150 in new refrigerators and freezers placed on the EU market from 1st January 2015.

Training and certification requirements

- ✓ Use certificated technicians for maintenance and refrigerant handling operations

End-of-life requirements

- ✓ Mandatory recovery of HFCs used as refrigerant and in foam insulation

Import reporting requirements

- ✓ **NEW:** Mandatory annual reporting of HFCs and HFOs in imported products

2. Sector description

The domestic refrigeration sector includes refrigerators, freezers and fridge/freezers. The majority are used in domestic dwellings, although they are also used in commercial and public sector organisations (e.g. in offices and canteens). This type of equipment might use HFCs as the refrigerant (usually HFC 134a) and as a foam blowing agent (usually HFC 245fa or HFC 365mfc).

The majority of domestic refrigeration equipment sold in the UK uses hydrocarbons for the refrigerant and blowing agent. Hydrocarbons are completely outside the scope of the F-Gas Regulation. However, a small proportion of new appliances use HFCs – these are usually larger refrigerators and freezers, often being “American-style” fridges imported from outside the EU. The quantity of refrigerant used in a domestic refrigerator is very small – typically between 0.05 and 0.25 kg.

3. Purchase of new equipment

NEW: The use of HFCs with a GWP¹ above 150 will be banned in new equipment placed on the EU market after January 1st 2015. This ban applies to both the refrigerant and the foam blowing agent. It will prevent the future use of HFC 134a as the refrigerant and HFCs 245fa and 365mfc as the foam blowing agents (as these all have GWPs well above 150).

It is likely that the majority of domestic refrigeration equipment will use hydrocarbons as refrigerant and foam blowing agents. Some manufacturers may use a new family of ultra-low GWP alternatives called HFOs. Hydrocarbons and HFOs have GWPs well below 150, hence are not affected by this ban. See Information Sheet 29 for guidance on low GWP HFC alternatives.

It is important to note that hydrocarbons are highly flammable and HFOs are mildly flammable. This may have an impact on the use of domestic refrigeration equipment in some circumstances. See Information Sheet 27 for guidance on flammability issues.

4. Operation of existing equipment

The 2014 F-Gas Regulation does not create any special requirements for the normal operation of domestic refrigeration equipment.

5. Training and certification

If domestic refrigeration equipment that contains an HFC refrigerant requires maintenance, then the technician carrying out the work must have an F-Gas handling qualification and must work for an F-Gas certificated company. See Information Sheet 21 for details of the certification requirements that apply to technicians working on domestic refrigerators and freezers.

6. End-of-life requirements

Any domestic refrigeration equipment containing HFCs in either the refrigeration circuit or the insulating foam that is being disposed of at end-of-life must undergo a proper recovery process.

Most local authorities operate refrigerator collection schemes and send old units to specialist waste handling plants, where the refrigerant is recovered and the insulation is then crushed and the blowing agent is also recovered.

¹ GWP: Global Warming Potential. See Information Sheet 25 for more information on GWP.

Commercial and public sector users of domestic refrigeration equipment should ensure that their old equipment is also sent to a specialist recovery facility.

7. Reporting of imports

NEW: Any imported products and equipment containing F-Gases need to be reported to the Commission on an annual basis. The first report covers the calendar year 2014 and must be submitted to the Commission by March 31st 2015. Reports for future calendar years must be made by March 31st of the following year.

Details of import reporting requirements are given in Information Sheet 20.

For domestic refrigeration there could be a requirement for reporting data if you are an importer that imported domestic refrigeration equipment containing HFCs from outside the EU during 2014.

It is important to note that use of HFCs with a GWP above 150 is banned in new domestic refrigerators and freezers from January 2015 – this applies to imports as well as equipment manufactured in the EU. This means that from 2015 onwards there should be no imports of refrigerators using HFC 134a.

The reporting requirements also refer to equipment containing HFO refrigerants – so if you import refrigerators and freezers using HFOs, these must be reported annually.

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This Information Sheet has been prepared by Gluckman Consulting

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