

- Containers
  - F-gases to be provided in returnable containers and bans disposable (non-refillable) containers. Containers must be labeled to show they contain F-Gases. Safety data sheets should contain F-Gas information, but it is not a legal requirement under the F-Gas Regulation.
- Equipment
  - New RAC equipment containing PFCs, HFCs requires labeling to show they contain F-Gases. Manuals are not legally required to contain F-gas information.
- Recovery
  - When handling F-Gases, emissions should be avoided and residual gases recovered at the end-of-life.

# What must be labelled? (1)

- Timetable
  - F-Gas Regulation requires certain labelling requirements from 4 July 2007
  - The implementing regulation, 1494/2007 provides a deadline of 1 April 2008 for implementation.

# What must be labelled? (2)

- The labelling requirements apply to:
  - All Refrigeration products and equipment containing PFCs
  - All refrigeration and air-conditioning equipment (except in motor vehicles), heat pumps containing HFCs
  - All F-Gas containers placed on the market
  - There are also labelling requirements for fire protection systems and fire extinguishers, and switch gear containing SF<sub>6</sub> but these are not explained here.

# What label information is required? (1)

- Added to an existing label or a new label :
- The words **'Contains fluorinated greenhouse gases covered by the Kyoto Protocol'**
- The abbreviated name(s) for the F-Gas, already used by industry.
  - This is already present on F-Gas container labels and most if not all equipment.

# What label information is required? (2)

- The quantity of the F-Gas, **in kilograms**, in the product or equipment but:
  - where F-Gases are added outside of the manufacturing site at the point of installation, the label should show the quantity added at the manufacturing site and the quantity added at the installation site, and the total quantity. The total quantity determines the inspection requirements for containment.
  - Containers should be labelled with the quantity of F-Gases charged in the filling plant. Labelling with the maximum amount rated for the container is already a requirement under other legislation.

# What label information is required? (3)

- For refrigeration, air-conditioning and heat pump equipment containing F-Gases as blowing agent for insulating foam, the label shall have the words
  - **'Foam blown with fluorinated greenhouse gases'**.
  - Note, guidance indicates that this is only a requirement for equipment containing F-Gases as refrigerants
- Hermetically sealed systems shall include on the label the words **'hermetically sealed'** on the label.

# What are the Label Technical Requirements? (1)

- Existing technical requirements for equipment and containers due to other legislation including
  - WEEE Directive (for equipment)
  - ADR 2007 -European Agreement Concerning the International Carriage of Dangerous Goods by Road (for containers)
- The F-Gas Regulation sets out technical requirements

## What are the Label Technical Requirements? (2)

- Information shall stand out clearly from its background and shall be easily read.
- The font size shall be at least the minimum size of other information on that label.
- The label and contents should remain in place and be legible throughout the period in which the product or equipment contains F-Gases.

## What are the Label Technical Requirements? (3)

- Label information shall be placed either on or adjacent to existing nameplates or product information labels, or adjacent to service access locations, or on that part of the product or equipment which contains the F-Gas.
  - Where there are multiple separate refrigeration circuits in a single unit, information should be listed for each individual circuit, whether on one label or on separate labels.
  - In split equipment the label information should be on that part of the equipment, which is initially charged with the refrigerant.

# Non-refillable containers (disposable cylinders)

- Disposable (non-refillable) cylinders containing HFCs should soon become unavailable. Only disposable cylinders containing HFCs already on the market by 4 July 2007 are allowed so they should quickly disappear from the market. Any residual HFCs must be recovered from disposable cylinders before disposal.

# What F-Gas containers must be labelled?

- Requirements only apply to F-Gas containers placed on the market and containing F-Gases
- All returnable cylinders, drums etc should be labelled
- As non-returnable containers are banned these requirements should not need to be applied
- Requirements do not apply to ISOtanks (bulk) if these are not placed on the market. ISOtanks used to deliver F-Gases, where control remains with the supplier, do not need additional F-Gas labelling
- Implementation regulation and Commission Guidance does not require recovery cylinders/drums to be labelled where they placed on the market empty.

# Manuals and Safety Data Sheets

- The draft implementing regulation set out requirements for manuals and safety data sheets for products and equipment that requires labelling.
- It has been concluded that there is no legal text in the F-Gas Regulation to allow this requirement to be implemented.
- Therefore there are no requirements for manuals/safety data sheets included in implementing regulation 1494/2007.

# Manuals and Safety Data Sheets

- It is good practice to include relevant information in the manuals and safety data sheets that will encourage responsible use and handling of F-Gases, and recovery at end of life.
- Safety Data Sheets provided by EFCTC member companies already contain relevant information, including the global warming potentials (GWP) of the F-Gases and guidance that the F-Gases may not be vented to the atmosphere.

# Transportation and Handling of F-Gases (1)

- The F-Gas Regulation sets out requirements to minimise emissions for a range of activities.
- For F-Gas containers any residual HFCs must be recovered when the container reaches the end of its life
- Containers may require inspection or refurbishment during their lifetime and recovery of F-Gases is required.
- It is a requirement not to vent to atmosphere F-Gases from containers.

## Transportation and Handling of F-Gases (2)

- Recovery of F-Gases is also required for other products and equipment 'to the extent that it is technically feasible and does not entail disproportionate cost'. The recovery shall be by 'appropriately qualified personnel.'
- This requires an evaluation of activities where F-Gases might be recovered, and if necessary to ensure suitable in-house or external training. Activities that might need re-evaluating in the context of the Regulation are recovery from filling lines, stock tanks, etc.



# F-Gas Regulation 842/2006

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