

Experis® speciality gases for refrigerant leak detection



There are two key regulations users of refrigerants must comply with:

1. F-Gas regulation 517/214 states manufacturers and users of equipment containing refrigerants carry out frequent leak detection checks. The focus here is to minimise the emissions of fluorinated gases into the environment.
2. EN 378:2008 the Safety and Environmental Standard for refrigeration systems and heat pumps. The emphasis is on safety and to ensure that in the event of a leak it is detected and the appropriate alarms given.

Air Products' Experis® range of calibration gases contains mixtures that have been optimised for leak detection in the refrigerant and air conditioning industries.

Function testing and calibration of sensors

To ensure compliance, your equipment and sensors, whether fixed installations or portable monitors, must be regularly tested.

For the ultimate peace of mind and safety, it is also good practice to recalibrate certain sensors periodically. This will ensure in the event that an alarm condition is identified, it is at the sensors' original setting. Over time all sensors drift, and whilst some must be replaced, others can last many years provided that they are recalibrated using the correct concentration of test gas.

Non-refillable canisters for calibration

The Experis gas range includes a comprehensive portfolio of non-refillable canisters that are ideal for certified gas mixtures such as those needed for the calibration and testing of your equipment. The benefits of these canisters include:

- Extremely portable and easy to use
- Long shelf-life – 60 months
- Certificate of analysis provided as standard
- Fast supply and delivery
- Ideal for low volume applications

Our customers and their markets

Refrigeration

Market	Customer Type
Light Commercial	Small independent food packagers
Commercial	Larger food packagers/food distribution
Industrial	Refrigerant storage, Agri food
Retail	Supermarkets, hypermarkets
Marine	Refrigerated self-contained containers

Air Conditioning

Fixed commercial and industrial units



Product range and order codes

The most common test gases used in refrigerant leak detection applications are available as standard with no minimum order quantities.

The table below shows the codes for a 1000ppm concentration of refrigerant in an air balance in our 110L canister. Other concentrations are available on request.



Refrigerant	Product code	Refrigerant	Product code
R12	347302	R404A	320098
R123	339349	R407A	339551
R1234YF	339420	R407C	319479
R1234ZE	350503	R407F	350370
R125	344026	R410A	319174
R134A	312123	R422A	350453
R14	335105	R422D	339658
R143A	329371	R448A	350454
R22	315130	R449A	350569
R227ea	350478	R507	333333
R23	334676	R717 (NH ₃)	318350
R32	350622	R744 (CO ₂)	319155

Applications

The testing of sensors and monitoring of equipment using refrigerant and air conditioning gases are wide and varied including:

- Controlled atmospheres
- Chill and cold stores
- Distribution centres
- Food processing and packaging
- Wine stores and breweries
- Refrigerated storage – food packaging
- Refrigerated cabinets and freezers
- Marine – shipping storage and port facilities
- Agricultural storage
- Large users of air conditioning units – IT and data centres, hotels, sports centres, office blocks
- Power stations

Gas control equipment

Flow regulators are also available as a complement to the non-refillable canister range, these have been specifically selected for the refrigerant leak detection application:

	Type	Description	Product code
	Fixed flow regulator	These stainless steel units are pre-set to deliver gas at a fixed flow rate. The pressure gauge shows the canister contents. The hose tail outlet accommodates a short length of polyurethane tubing (supplied) which can be used to connect to the instrument.	198483 : 0.3 lpm 197943 : 0.5 lpm 197941 : 1.0 lpm 197942 : 1.5 lpm

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