

# DuPont™ ISCEON® REFRIGERANTS

## CASE STUDY- ISCEON® MO29 (R422D)

### Fruit Cold Store

#### Conversion of a Cold Storage Warehouse for Bananas at Hamburger Hafen Logistik AG (HHLA)

With the ban on recharging of refrigeration and air-conditioning systems with virgin HCFC refrigerants (predominantly R-22) rapidly approaching. The German harbour logistics company, Hamburger Hafen Logistik AG (HHLA), acting on the advice of its refrigeration contractor Dresdner Kühlanlagenbau (DKA) and DuPont Refrigerants, has reacted promptly by initiating a pilot project to convert several R22 refrigerated warehouses to the non-ozone-depleting DuPont™ ISCEON® MO29 (R422D). It is the first company at the harbour in Hamburg to do so.

There are a further ten refrigeration systems at HHLA, used for the storage of bananas and pineapples, which still operate with R-22 or R402A. However, the managers of these cold storage houses, Bernhard Albiser and Horst Stroh, do not want to run the risk of exposure to over-booked contracting firms or potential fines, and are proactively tackling the conversion issue in advance of the deadline.

A smaller refrigerated warehouse for bananas was selected by the company for the first conversion. The company's decision to take this initial step was prompted by consultation from Andreas Borst, service manager at DKA's sales and services office in Hamburg, who is responsible for servicing the refrigeration systems at HHLA, and DuPont.



The interconnected system, using R-22, has been used in the warehouse since 1993 to cool four similar-sized banana stores with a total volume of 2100 cubic metres. The storage temperature for such items needs to be maintained as close to +13.5°C as possible

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The conversion to ISCEON® MO29 was decided upon at the end of August 2006, and was carried out just a few weeks later by Bernd Wedemann, refrigeration unit engineer at DKA, who was greatly impressed by its simplicity: “Virtually no technical modifications to the unit were required.” The principle advantage for the end-user was expressed by Bernhard Albiser, technical manager at HHLA: “Operations were not disrupted by the conversion, saving us both precious time and money.”

ISCEON MO29 (R422D) was originally developed for use in water chillers but is now also used in a wide range of high and low temperature refrigeration applications.

ISCEON® MO29 (R-422D) is one of the three DuPont replacements for R-22 which have been developed especially for use in medium- and low-temperature applications as well as in air conditioning. All three products offer the decisive benefit of compatibility with MO and AB lubricants in existing units, thus a change of oil type to more expensive POE oil is not required. This saves material costs, time and manpower. Energy consumption can also fall, as has been previously documented through numerous conversions in England and the USA. In applications such as those used in food retail, where refrigeration can be responsible for 40-60 percent of energy consumption, this can lead to significant cost savings.

These refrigerants are also in use in UK cold stores where they are replacing the ozone depleting R22 and R408A

Please consult our website [www.idsrefrigeration.co.uk](http://www.idsrefrigeration.co.uk) for further product information and conversion guidelines.

The information contained in this document is given in good faith based on our current knowledge. We guarantee that our products comply with our sales specifications. This information must on no account be used as a substitute for necessary prior tests, which alone can ensure that a product is suitable for a given use.