Timely conversion of R-22 refrigeration systems:

REWE Group successfully completes pilot project – considerable savings potential



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Photo: DuPont

The German REWE Group has converted an R-22-based refrigeration unit at a Minimal Markt in Munster, northern Germany, to non-ozone-depleting DuPont ISCEON® M029 refrigerant. The unit cools over 40 metres of shelves and display cabinets for meat, milk and other dairy products, as well as three further cold rooms.

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Photo: DuPont

The conversion to ISCEON® MO29, which took place at the Minimal Markt in the middle of March, required virtually no technical modifications to the existing unit. Food remained undamaged and sales went on without interruption, saving the retailer both time and money.

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Stevenage, June 2006. According to EU regulation 2037/2000 and future decrees relating to chemicals and the ozone layer, the recharge of refrigeration and airconditioning systems with virgin HCFC refrigerants (predominantly R-22) will be banned from 31st December 2009 onwards. A large majority of the estimated, over one million R-22-based systems in Germany are operated by food retailers. Yet despite the apparent remoteness of this deadline, there is a need for imminent action to avoid supply shortages, refrigeration unit outages, product losses and, in the worst case, administrative penalties. The German REWE Group is one of the first retails giants to react, and has converted its first refrigeration unit to non-ozone-depleting DuPont ISCEON® M029 refrigerant as part of a pilot project.

Within the 5,000 supermarkets across Germany belonging to the REWE Group, there are approximately 2,000 refrigeration units which are still running on R-22. This means that in order to meet the 2010 deadline, 13 supermarkets per week for the next three years need to be either converted or, as part of a store's refurbishment, newly-equipped. Because the retail giant does not want to run the risk of over-booked contractors and potential fines, it is proactively tackling the conversion issue far ahead of the deadline.

A Minimal Markt in Munster, northern Germany, which belongs to the REWE Group, was selected for a first pilot project. Decisive in the company's decision to take this initial step was consultation provided by Mathias Diebold, product manager at Linde Kältetechnik GmbH, which is currently responsible for the refrigeration systems at the store, and Joachim Gerstel, market development manager for ISCEON® refrigerants at DuPont.

The R-22 unit at the store, which was built in 1989, cools over 40 metres of shelves and display cabinets for meat, milk and other dairy products, as well as three further cold rooms. The conversion to ISCEON® MO29, which took place in the middle of March, was carried out by Ralf Sievert, refrigeration unit engineer at Linde, who was greatly impressed by its simplicity. "A routine procedure! Virtually no technical modifications to the unit were required." And the principle advantage for the end-user was expressed by Harald Van Dillen, store manager in Munster: "Business

was not disrupted by the conversion. This is of great advantage to retailers, as food remains undamaged and sales go on without interruption. This saves us both precious time and money."

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 by an average of up to 12 percent, 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.

DuPont Fluorochemicals is a leading global supplier of refrigerants, using science and technology, market knowledge and global reach to provide sustainable materials and solutions to enhance personal comfort, enable food preservation, improve industrial processing and reduce environmental footprints. For more information, please visit www.refrigerants.dupont.com.

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