

The Nestlé Position on Industrial Refrigeration

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In line with our environmental policy, Nestlé reiterates its commitment to natural refrigerants.

Nestlé will continue its program, begun in 1986, to phase out our few remaining industrial CFC and HCFC refrigeration systems, replacing them with natural refrigerants ahead of government imposed targets.

Wherever possible, Nestlé will use natural refrigerants in new industrial refrigeration systems. Further, we emphasise our preference for using the combined characteristics of ammonia and carbon dioxide in suitable applications.

Refrigerants in industrial

food production Modern food production, storage and distribution would be impossible without extensive use of refrigeration. Since their first introduction in the mid-1800's, closed circuit refrigeration systems have played a critical role in food manufacturing and in dramatically improving the safe storage and distribution of raw materials and finished products.

As the world's leading food company, the safe, efficient management of industrial refrigeration systems is of critical importance to Nestlé's business success. In responsibly managing these systems, Nestlé has always had a clear preference for natural refrigerants, especially ammonia; generally only using alternatives when there were clear needs that ammonia could not satisfy at the time of construction. Nestlé strives for continuous improvement in the technology and management of industrial refrigeration systems.

Refrigerants and the environment

Today, the industrial refrigeration industry is faced with many challenges. The previously accepted CFC and HCFC refrigerants have been linked to depletion of the stratospheric ozone layer, resulting in usage restrictions and their ultimate phase out under the Montreal Protocol. The future of many replacement refrigerants, such as HFC's, is in doubt due to global warming concerns. Also due to the global warming issue, it is important that industry builds, operates and maintains industrial refrigeration systems to achieve the best practical energy efficiency, so reducing indirect emissions of greenhouse gases.

These developing issues have caused Nestlé to re-affirm its clear preference for natural refrigerants and to continue its phase-out program, started in 1986, which has already reduced the emissions of ozone depleting substances per tonne of product manufactured by 93%.

Refrigerants and human safety

The historical move of industry to CFC, HCFC and HFC refrigerants was often motivated by a desire to improve plant safety by avoiding the hazards of some natural refrigerants. Today however, with proper design, construction and operation, a modern industrial system, using selected natural refrigerants can achieve required safety levels.

As with food safety, Nestlé is totally committed to ensuring the safety of our people and our neighbours. Therefore, we design, build and operate our industrial refrigeration systems to ensure that safety is not compromised and continuously seek ways to further improve performance. Where it was necessary, we adopted higher standards than locally demanded.

Nestlé and technological

developments Nestlé engineers have found that, in most food processing applications, ammonia and carbon dioxide together in a cascade refrigeration system can further improve plant safety and efficiency, so meeting environmental and social responsibilities while making good economic sense.

Therefore, since 1997, Nestlé has taken a leading role to revive carbon dioxide as an industrial refrigerant. This culminated in the commissioning this year of the largest carbon dioxide/ammonia cascade refrigeration system built in the past 50 years.

Nestlé and the industrial

refrigeration industry Industrial refrigeration is not Nestlé's core business. Therefore, our position can only be sustained with the ongoing support of our partners in the refrigeration industry to provide technical support, equipment and systems that use natural refrigerants, especially carbon dioxide and ammonia. Therefore, Nestlé would like to acknowledge those organisations that have embraced the revival of this technology and who are working with us to realise our goal.