IDENTIFICATION

Product Name:	**COLD® 1270**
UN Number:	1077
Other Names:	Propylene, Hydrocarbon Blend **(C-45)**
Manufacturers Code:	R1270
Dangerous Goods Class:	2.1
Subsidiary Risk:	None
Emergency Procedures Guide:	2A2

USE: A flammable gas used as refrigerant, normally stored under pressure in liquid form.

PHYSICAL DESCRIPTION/PROPERTIES:

Appearance:	Rapidly evaporating liquid or gas with rotten cabbage-like odour
Initial Boiling Point:	-47.7 °C
Melting Point:	-185 °C
Solubility in Water:	Very slight
Vapour Pressure at 20 Deg C:	10.2 bar
Molecular Weight:	42.0
Flash Point:	-108 °C
Lower Flammability Limit:	2.4% in air
Upper Flammability Limit:	11.0% in air
Vapour density:	1.5 air = 1
% Volatilise:	100 %

OTHER PROPERTIES:

Evaporation Rate:	Rapid
Auto ignition Point:	455 °C

INGREDIENTS:

Chemical Entity		Other Names	CAS Number	Proportion
C_3H_6	**(Propylene)**	-	115-07-1	99.5%

COLD® 1270 contains odourant ethyl mercaptan unless otherwise authorised. (recommended 25 mg/kg)
This is detectable to 20 % of its lower flammability limit.

HEALTH HAZARD INFORMATION

HEALTH HAZARDS

Inhaled: May cause irritation of the respiratory tract. May also cause headaches or dizziness at moderate exposures. Asphyxiant. Causes unconsciousness and respiratory arrest at elevated exposures.

Eye: Irritating if the liquid gets into the eyes, with a possible hazard from freezing due to rapid evaporation. Vapours in high concentration may also be irritating.

Skin: Excessive prolonged contact to the liquid can cause skin irritation and frostbite due to rapid evaporation.

Swallowed: Unlikely to be a problem, owing to high evaporation rate.

Chronic: No effects reported from long term industrial exposure to this product.

FIRST AID

Inhaled: Avoid breathing vapours and fumes as much as possible. If someone is overcome by fumes, remove them to fresh air immediately. However, rescuers should avoid becoming a casualty by wearing suitable respiratory protection. If the affected individual is not breathing, administer artificial respiration. Seek medical advice promptly in serious cases of over-exposure.

Eye: Avoid eye contact with the product. Remove any contact lenses carefully. Hold eyelids open and flush eyes with fresh tepid water for 15 minutes. Seek medical advice immediately for all eye contact. Where significant splashing of *COLD® 1270* liquid may occur, eyewash Facilities stations Should be installed.

Skin: Avoid skin contact with the liquid. Remove contaminated clothing and wash the exposed areas with plenty of soap and water. Seek medical advice if irritation or frostbite (see below) occurs.

Swallowed: Unlikely to be a problem, owing to high evaporation rate.

Frostbite: Obtain medical assistance.
If medical advice is not available immediately, place casualty in a warm area as soon as possible and allow the injured area to warm gradually (further damage may occur if the area of injury warms too rapidly). DO NOT EXPOSE THE INJURED AREA TO EXCESS HEAT OR COLD (such as heat lamps, hot water, snow or ice). Gently cover or drape the injured area with clean material, such as a dressing or sheet. To relieve pain, immerse the injured area in water which is near or at body temperature (35-4O deg C). If possible, get the casualty to exercise the injured area gradually. Give them something warm to drink, BUT NO ALCOHOL. Seek medical advice as soon as possible.

ADVICE TO DOCTOR *No specific treatment recommended. Treat symptomatically. Show a copy of this material safety data sheet to medical personnel dealing with cases of over-exposure.*

PRECAUTIONS FOR USE

ENGINEERING CONTROLS

Ensure there is good ventilation of the area in which the product is used to keep concentrations below the exposure standard or lower explosive limit. While dilution by air may be sufficient in most cases, mechanical exhaust ventilation may be required. In such cases, use sparkproof equipment if possible. A ventilation velocity of at least 0.3 m/s is recommended.

PERSONAL PROTECTION

Avoid contact with eyes and skin. Overalls or a long sleeved shirt and closed-in shoes or safety footwear should be worn as a general precaution.

Eye Protection: Eye protection is required (faceshield, chemical safety glasses or side shield glasses) where splashing is likely.

Gloves: Impervious oil and cold resistant gloves should be worn when using this product. Gloves made of PVC are preferred, though gloves made of nitrite and chloroprene should also be satisfactory.

Respiratory Protection: If ventilation of the area is not sufficient, respiratory protection may be required. This should be at least approved air supplied or self-contained breathing apparatus where the exposure standard is likely to be exceeded or if work is required close to large gas leaks.

FLAMMABILITY

COLD® 1270 is gaseous and highly flammable at normal temperatures and pressures. is normally stored under pressure in the liquid form. Release of pressure is associated with rapid cooling, the intensity of which is dependent on the rate of release. Containers of *COLD® 1270* are explosive hazards, when exposed to excessive heat.

SAFE HANDLING

STORAGE AND TRANSPORT

Storage: *COLD® 1270* should be stored in approved areas only. Minimum conditions of storage include dry, cool, secure storage away from heat, sources of ignition and oxidising substances. Keep containers closed and upright when not in use.

Transport: Large volumes must be transported in approved tankers, and smaller volumes in approved pressure containers.

SPILLS AND DISPOSAL

Spills: Cut off source of leak. If the release is large, cut off all ignition sources and evacuate all non-essential personnel from the area. If possible, ventilate the area. If the incident is significant, seek immediate assistance from local fire authorities and police. If possible, monitor the vapour concentration until dissipated.

Disposal: If possible, allow to evaporate. Large volumes should be removed by tanker or by controlled burning. *COLD® 1270* can be disposed by approved incineration methods. Contact local supplier or fire brigade for further advice on disposal.

FIRE/EXPLOSION HAZARD

Hazchem Code: 2WE

Extinguishers: Water spray or extinguisher.

Procedures: Stay out of gas or vapour. Use water to disperse unignited gas or vapour. Allow to burn out, if possible.

Special Precautions: Fire-fighters should wear full protection and breathing apparatus. *COLD® 1270* is heavier than air, and vapours will tend to flow downwards and accumulate in low-lying areas such as drains and pits at ground level.

Containers: Cool fire exposed containers with water spray. If ignition has occurred and water is not available, tank metal may weaken from overheating.

Reactivity: Stable

Incompatibilities: Oxidisers

Combustion Products: Hazardous combustion products of carbon dioxide (carbon monoxide under poor conditions of combustion) and smoke may be produced. Hazardous polymerisation will not occur.