1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name  R403B
Company identification  see heading and/or footer
Emergency phone numbers  see heading and/or footer

2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation  Preparation
Components/Impurities  Contains the following components: 56% w/w Chlorodifluoromethane (R22) [N;R59]/39% w/w Octafluoropropane (R218)/5% w/w Propane [F+;R12]
EEC Nr (from EINECS)  Not applicable for preparations

3 HAZARDS IDENTIFICATION

Hazard identification  Liquefied gas
In high concentrations may cause asphyxiation.

4 FIRST AID MEASURES

Inhalation  In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.
In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.
Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
Skin/eye contact  In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing.
Immediately flush eyes thoroughly with water for at least 15 minutes.
Obtain medical assistance
Ingestion  Ingestion is not considered a potential route of exposure.

5 FIRE FIGHTING MEASURES

Specific hazards  Exposure to fire may cause containers to rupture/explode.
Non flammable
Hazardous combustion products  If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition:
Carbonyl fluoride
Carbon monoxide
Phosgene
6 ACCIDENTAL RELEASE MEASURES

Personal precautions  Evacuate area.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Ensure adequate air ventilation.

Environmental precautions  Try to stop release.
Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Clean up methods  Ventilate area.

7 HANDLING AND STORAGE

Handling and storage  Suck back of water into the container must be prevented.
Do not allow backfeed into the container.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Refer to supplier's container handling instructions.
Keep container below 50°C in a well ventilated place.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit value for country  UK: Chlorodifluoromethane (R22) - LTEL: 1000ppm (EH40/2000)

Personal protection  Ensure adequate ventilation.
Protect eyes, face and skin from liquid splashes.
Do not smoke while handling product.

9 PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight  103.2
Boiling point  -49.5 °C
Critical temperature 90 °C
Relative density, gas 3.5 (air=1)
Relative density, liquid 1.2 (water=1)
Vapour Pressure 20°C 11.5 bar
Solubility mg/l water No reliable data available.
Appearance/Colour Colourless gas
Odour Ethereal
Poor warning properties at low concentrations.
Other data Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10 STABILITY AND REACTIVITY
Stability and reactivity
Thermal decomposition yields toxic products which can be corrosive in the presence of moisture.
Stable under normal conditions.

11 TOXICOLOGICAL INFORMATION
General Chlorodifluoromethane (R22) - May produce irregular heart beat and nervous symptoms.

12 ECOLOGICAL INFORMATION
General Chlorodifluoromethane (R22) - May have damaging effect on ozone layer./Covered by the ’Montreal Protocol./When discharged in large quantities may contribute to the greenhouse effect.
Ozone depletion factor 0.031 (R11=1)
Global warming factor 3700 (CO2=1)

13 DISPOSAL CONSIDERATIONS
General Must not be discharged to atmosphere.
Do not discharge into any place where its accumulation could be dangerous.
Refer to supplier's waste gas recovery programme.
Contact supplier if guidance is required.

14 TRANSPORT INFORMATION
UN Nr 3163
Class/Div 2.2
ADR/RID Item Nr 2, 2°A
ADR/RID Hazard Nr 20
Labelling ADR
Label 2: non flammable non toxic gas

Other transport information
Avoid transport on vehicles where the load space is not separated from the driver's compartment.

Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers ensure that they are firmly secured and:
- cylinder valve is closed and not leaking
- valve outlet cap nut or plug (where provided) is correctly fitted
- valve protection device (where provided) is correctly fitted
- there is adequate ventilation.
- compliance with applicable regulations.

15 REGULATORY INFORMATION
Number in Annex I of Dir 67/548 Not applicable for preparations
EC Classification Not classified as dangerous substance.

Labelling of cylinders
- Symbols Label 2: non flammable non toxic gas

16 OTHER INFORMATION
Ensure all national/local regulations are observed.
Contact with liquid may cause cold burns/frost bite.
Asphyxiant in high concentrations.
Keep container in well ventilated place.
Do not breathe the gas.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.
Users of breathing apparatus must be trained.
Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

End of document.

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