Safety Data Sheet

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name: Dichlorotetrafluoroethane, R114
Chemical formula: C2Cl2F4
Company identification: see heading and/or footer
Emergency phone numbers: see heading and/or footer

2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation: Substance.
Components/Impurities: Contains no other components or impurities which will influence the classification of the product.
CAS Nr: 76-14-2
EC Nr (from EINECS): 200-937-7

3 HAZARDS IDENTIFICATION

Hazards identification: In high concentrations may cause asphyxiation. Dangerous for the ozone layer. Liquefied gas

4 FIRST AID MEASURES

Inhalation: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. 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: 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.
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
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: Dichlorotetrafluoroethane (R114) - LTEL: 1000ppm; STEL: 1250ppm (EH40/2002)

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

9 PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight
171
Melting point: -94 °C
Boiling point: 3.8 °C
Critical temperature: 146 °C
Relative density, gas: 5.9 (air=1)
Relative density, liquid: 1.5 (water=1)
Vapour Pressure 20°C: 1.8 bar
Solubility mg/l water: 130 mg/l
Appearance/Colour: Colourless gas
Odour: Ethereal

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: Stable under normal conditions. Thermal decomposition yields toxic products which can be corrosive in the presence of moisture.

11 TOXICOLOGICAL INFORMATION
General: May produce irregular heart beat and nervous symptoms.

12 ECOLOGICAL INFORMATION
General: 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: 1 (R11=1)
Global warming factor: 9300 (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

Proper shipping name: 1,2-DICHLORO-1,1,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 114)
UN Nr: 1958
Class: 2
ADR/RID Classification code: 2A
ADR/RID Hazard Nr: 20
Packing group: None
Labelling ADR: Label 2.2: non flammable non toxic gas
IMDG EmS codes: F-C, S-V
IMDG Marine pollutant: No
IATA passenger packing instruction: 200
IATA passenger max. quantity/pack: 175kg
IATA cargo packing instruction: 200
IATA cargo max. quantity/pack: 75kg
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 included in Annex I.
EC Classification: Proposed by the industry
- N;R59
- Labels of cylinders
  - Label 2.2: non flammable non toxic gas
  - R59 Dangerous for the ozone layer.
16 OTHER INFORMATION

Ensure all national/local regulations are observed.
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.
This safety data sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.
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.
Number of pages :5