1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

<table>
<thead>
<tr>
<th>Product name</th>
<th>1,1 Dichloro-2,2,2-trifluoroethane, R123</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical formula</td>
<td>CHCl₂CF₃</td>
</tr>
</tbody>
</table>

Company identification see heading and/or footer
Emergency phone numbers see heading and/or footer

2 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance/Preparation</th>
<th>Substance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components/Impurities</td>
<td>Contains no other components or impurities which will influence the classification of the product.</td>
</tr>
<tr>
<td>CAS Nr</td>
<td>00306-83-2</td>
</tr>
<tr>
<td>EC Nr (from EINECS)</td>
<td>206-190-3</td>
</tr>
</tbody>
</table>

3 HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Hazards identification</th>
<th>In high concentrations may cause asphyxiation. Liquid.</th>
</tr>
</thead>
</table>

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.
Do not use adrenaline or similar cardiac stimulants

**Skin/eye contact**
Remove contaminated clothing. Drench affected area with water for at least 15 minutes
Immediately flush eyes thoroughly with water for at least 15 minutes.
Obtain medical assistance

**Ingestion**
Rinse mouth with water, do not induce vomiting, call a doctor.

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
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
Absorb excess liquid spillage on inorganic absorbant material such as fine sand, brick dust etc.
Place spent absorbant in sealed packages and contact specialist waste disposal contractor.
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/PERSOAL PROTECTION

Exposure limit value for country
UK: LTEL: 50ppm
9 PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight 152.9
Boiling point 27.6 °C
Critical temperature 185 °C
Relative density, gas 5.3 (air=1)
Relative density, liquid 1.46 (water=1)
Vapour Pressure 20°C 0.74 bar
Solubility mg/l water 3900 mg/l at 25°C
Appearance/Colour Colourless liquid
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.
Incompatible materials:-
Alkali metals.
May react with aluminium.

11 TOXICOLOGICAL INFORMATION

General
May cause dermatitis by skin contact.
May produce irregular heart beat and nervous symptoms.

LC50 inh(rat/4h) 32 ml/l
12 ECOLOGICAL INFORMATION

General

Covered by the 'Montreal Protocol'.
May have damaging effect on ozone layer.
When discharged in large quantities may contribute to the greenhouse effect.

Ozone depletion factor 0.02 (R11=1)
Global warming factor 93 (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
Not classified as dangerous preparation.

Class
Not applicable

Labelling ADR
No symbol required.

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
Not classified as dangerous preparation.

-Symbols
No symbol required.
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.
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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