
SAFETY DATA SHEET

This Safety Data Sheet is provided in compliance with the EC Directive 1907/2006-453/2010

SECTION 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Product Name: UNICOOL R-22
- Product Part Number: 905621 (12,5 kg), 905059 (57 kg)

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Use of the substance/mixture:
Refrigerant

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Wilhelmsen Ships Service AS
- Address of Supplier: Willem Barentszstraat 50, 3165AB Rotterdam, The Netherlands
- Telephone: +31 4877 777 Fax: +31 4877 888
-
- Head office: Wilhelmsen Ships Service AS
Strandveien 20, N1324 Lysaker
Norway, Tel: (47) 6349 440 35
-
- Other suppliers SEE SECTION 16!!!
- For quotations contact your local Customer Services
-
- Responsible Person: Product HSE Manager,
Email: Email: WSS.GLOBAL.SDSINFO@wilhelmsen.com
- Telephone: Tel.: +31 10 4877775

1.4 Emergency telephone number

- ****ONLY TO BE USED IN CASE OF AN INCIDENT****
-
- International 24hrs Emergency NCEC:+ 44 1865 407333
- American Chemistry Council 24hrs +1 703 527 3887
- American 24hrs Emergency CHEMTREC (800) 424 9300
- Greece: Poisoning emergency center, +30 210 7793777
- Norway: Poison information centre, +47 22591300
- Sweden: Poison information centre, +46 08 33 12 31
- China NRCC 24hrs emergency telephone number: +86-0532-8388 9090
- Wilhelmsen Ships Service, Melbourne, AUSTRALIA Emergency 24hrs: +61 3 9630 0998

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

- Not classified as hazardous for users

2.2 Label elements



SECTION 2 Hazards identification (....)

- Signal Word: Warning
- Hazard phrases
Contains gas under pressure; may explode if heated (H280).
- Precautionary Phrases
Protect from sunlight (P410).
Avoid release to the environment (P273).
Store in a well-ventilated place (P403).
Wear cold insulating gloves/face shield/eye protection (P282).

2.3 Other hazards

- Odour: Sweet ether-like odour
- Appearance: Liquefied pressure gas
- Contact with eyes: May cause redness and irritation
- Contact with skin: Possible frost-bite of affected areas
- Inhalation: May cause dizziness, confusion, headache or stupor, In cases of severe exposure, anaesthesia may develop

SECTION 3 Composition/information on ingredients**3.1 Mixtures**

- Chlorodifluoromethane (R-22)
Concentration: 100%
CAS Number: 75-45-6
EC Number: 200-45-6
R/H Phrases: R59, H280, EUH059
Symbols: N, GHS04
Categories:

SECTION 4 First aid measures**4.1 Description of first aid measures**

- Thaw frosted parts with lukewarm water. Do not rub affected area (P336).
- In case of contact with liquid, thaw frosted parts with water. Do not attempt to remove clothing which has stuck to the skin
- Get immediate medical advice/attention (P315).
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).
- Get immediate medical advice/attention (P315).
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P341).
- Apply artificial respiration only if patient is not breathing
- When in doubt or symptoms persist, seek medical attention

4.2 Most important symptoms and effects, both acute and delayed

- In cases of severe exposure, breathing difficulty may develop
- In cases of severe exposure, respiratory failure may develop
- In cases of severe exposure, dizziness, confusion, headache or stupor may develop

- In cases of severe exposure, frost-bite may develop

4.3 Indication of any immediate medical attention and special treatment needed

- No information available

SECTION 5 Fire-fighting measures

5.1 Extinguishing media

- Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions

5.2 Special hazards arising from the substance or mixture

- Pressurized container
- Inform Fire Brigade of potential danger of exploding and rocketing cylinders

5.3 Advice for firefighters

- Keep container(s) exposed to fire cool, by spraying with water
 - Smoke from fires is corrosive. Take precautions to protect personnel from exposure
 - Wear chemical protection suit and positive-pressure breathing apparatus
 - See Section 10
-

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- In poorly ventilated areas or confined spaces, use an airline respirator or self-contained breathing apparatus

6.2 Environmental Precautions

- Avoid release to the environment (P273).

6.3 Methods and material for containment and cleaning up

- Shut off source of leak if safe to do so
- Allow product to evaporate
- Ventilate area

6.4 Reference to other sections

- See Section 13
-

SECTION 7 Handling and storage

7.1 Precautions for safe handling

- Use only outdoors or in a well-ventilated area (P271).
- Restricted to professional users
- Do not breathe dust/fume/gas/mist/vapours/spray (P260).

7.2 Conditions for safe storage, including any incompatibilities

- Keep in a cool, dry, well ventilated place
- Do not store above 45 °C

7.3 Specific end use(s)

- Restricted to professional users
-

SECTION 8 Exposure controls/personal protection

8.1 Control parameters

- Chlorodifluoromethane (R-22)
TLV (TWA) 1000 mg/m³ ()

8.2 Exposure controls

- The undiluted product must not be used in a confined space without good ventilation

8.3 Occupational exposure controls

SECTION 8 Exposure controls/personal protection (....)

- In poorly ventilated areas or confined spaces, use an airline respirator or self-contained breathing apparatus
 - Wear safety boots when handling cylinders.
-

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Odour: Sweet ether-like odour
- Appearance: Liquefied pressure gas
- Boiling point -40.8 °C to 760 °C
- Vapour pressure 1044 kPa @ 25 °C
- Vapour density (air = 1) 3,03
- Freezing point -160 °C to 760 °C
- Water solubility 3 g/l
- Density 1210 kg/m³ at 20 °C
- Not flammable
- Unstable above 250 deg C
- Auto-ignition point >700 deg C at 760 mm Hg

9.2 Other information

- No information available
-

SECTION 10 Stability and reactivity

10.1 Reactivity

- This article is considered stable under normal conditions

10.2 Chemical stability

- Considered stable under normal conditions

10.3 Possibility of hazardous reactions

- Smoke from fires is corrosive
- Smoke from fires is toxic

10.4 Conditions to avoid

- Avoid contact with magnesium and alloys containing more than 2% magnesium.

10.5 Incompatible materials

- Avoid contact with magnesium and alloys containing more than 2% magnesium.

10.6 Hazardous Decomposition Products

- Decomposition products may include carbon oxides
 - Decomposition products may include hydrogen chloride
 - Decomposition products may include phosgene
-

SECTION 11 Toxicological information

11.1 Information on toxicological effects

- No experimental data available

11.2 Contact with eyes

- May cause frost-bite

11.3 Contact with skin

SECTION 11 Toxicological information (....)

- May cause frost-bite

11.4 Ingestion

- Not regarded as a potential route of exposure.

11.5 Inhalation

- In cases of severe exposure, anaesthesia may develop
 - May disturb the respiration, heart and nervous system
-

SECTION 12 Ecological information

12.1 Toxicity

- On available data, substance is not harmful to aquatic life

12.2 Persistence and degradability

- Not readily biodegradable

12.3 Bioaccumulation Potential

- Bioaccumulation is insignificant

12.4 Mobility in soil

- This substance is involatile

12.5 Results of PBT and vPvB assessment

12.6 Other Adverse Effects

- This product is controlled under the "Montreal Protocol" (1992 revision).
 - Global Warming Potential: 1700 (CO₂ = 1; 100 years)
 - Ozone Depletion Potential: 0,049
 - GWP and ODP values according to IPCC/ASHRAE/ARI.
 - IPCC = Intergovernmental Panel on Climate Control
 - ASHRAE = American Society of Heating, Refrigeration and Air-Conditioning Engineers
 - ARI = American Refrigeration Institute
-

SECTION 13 Disposal considerations

13.1 Waste treatment methods

- Dispose of contents/container to an authorised waste collection point (P501)
- Disposal should be in accordance with manufacturer's instructions
- Refer to manufacturer/supplier for information on recovery/recycling (S59)

13.2 Classification

- EU Waste class: n/a
-

SECTION 14 Transport information

14.1 UN

- UN No.: UN1018
- Proper Shipping Name: CHLORODIFLUOROMETHANE (REFRIGERANT GAS R-22)
- Hazard Class: 2.2
- Packing Group: -

14.2 Environmental hazards

SECTION 14 Transport information (....)

- On available data, substance is not harmful to aquatic life

14.3 Special precautions for user

- Gas cylinders must be equipped with valve protection caps during transport.

14.4 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

- Not applicable

14.5 Road/Rail (ADR/RID)

- ADR UN No.: UN1018
- Proper Shipping Name: CHLORODIFLUOROMETHANE (REFRIGERANT GAS R-22)
- ADR Hazard Class: 2.2
- ADR Packing Group: -

14.6 Sea (IMDG)

- IMDG UN No.: UN1018
- Proper Shipping Name: CHLORODIFLUOROMETHANE (REFRIGERANT GAS R-22)
- IMDG Hazard Class: 2.2
- IMDG Pack Group.: -
- IMDG EmS: F-C, S-V

14.7 Air (ICAO/IATA)

- ICAO UN No.: UN1018
- Proper Shipping Name: CHLORODIFLUOROMETHANE (REFRIGERANT GAS R-22)
- ICAO Hazard Class: 2.2
- ICAO Packing Group: -

14.8 DOT / CFR (US Department of Transportation)

- Identification Number: UN1018
 - DOT Proper Shipping Name: CHLORODIFLUOROMETHANE (REFRIGERANT GAS R-22)
 - DOT Labels: 2.2
 - Product RQ (lbs): -
-

SECTION 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- This Safety Data Sheet has been prepared in accordance with article 31 and annex II in REACH and Directive 453/2010/EU.

15.2 Chemical Safety Assessment

- None
-

SECTION 16 Other information

Text not given with phrase codes where they are used elsewhere in this safety data sheet:-
EUH059: Hazardous to the ozone layer. H280: Contains gas under pressure; may explode if heated. R59: Dangerous for the ozone layer.

The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents

The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer

The data given here is based on current knowledge and experience. This Safety Data Sheet

SECTION 16 Other information (....)

describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties

The most up-to-date version of this MSDS can be found on www.wilhelmsen.com/shipsservice

OTHER CONTACT INFORMATION MAJOR CHEMICAL OFFICES

Wilhelmsen Ships Service Level 17, 636 St Kilda Road Melbourne Vic 3004 AUSTRALIA

Tel: +61 3 9630 0900 Emergency 24hrs: +61 3 9630 0998

Wilhelmsen Ships Service INC 210 Edgewater Street US-10305 Staten Island New York United States Telephone daytime: (+1) 718 815 1310 Fax: (+1) 718 233 3268

Wilhelmsen Ships Service INC 2200 W. Pacific Coast Highway US-90810 Long Beach California, United States Tel (+1) 562 624 8888 Fax (+1) 562 624 1011

Wilhelmsen Ships Service INC 701 Ashland Ave. Ashland Center Two, Bay 12 US- 19032 Folcroft Pennsylvania United States Tel (+1) 610 586 7801 Fax (+1) 215 701 0646

Wilhelmsen Ships Service INC. 9400 New Century Drive US-77507 Pasadena Texas United States Telephone daytime: (+1) 281 867 2000 Fax: (+1) 281 867 2800

Wilhelmsen Ships Service Ltd. Unit 3A NewtonsCourt Crossways DA2 6QL Dartford, Kent United Kingdom Tel (+44) 1322 282 412 Fax (+44) 1322 284 774

Wilhelmsen Ships Service Ltda Rua Bispo Lacerda nos.61/67 Del Catilho BR 21051120 Rio de Janeiro Brazil Tel (+55) 21 25 82 8000 Fax (+55) 21 25 82 8001

Wilhelmsen Ships Service (S) Pte Ltd 186 Pandan Loop Singapore 128376 Tel (+65) 6395 4545

Wilhelmsen Ships Service Co., Ltd 12-31 Torihama-cho Kanazawa-ku Yokohama-shi JP-236 0002, Japan Tel (+81) 45 775 0012 Fax (+81) 45 775 0070

Wilhelmsen Ships Service Hellas SA 100, D. Moutsopoulou & Serifou str GR-185 41 Piraeus Greece Tel (+ 30) 210 4239100 Fax (+ 30) 210 4212480

Wilhelmsen Ships Service AS U.A.E . FI 24 Executive Heights, Tecom C Sheikh Zayed Road (East) Dubai United Arab Emirates Tel (+971) 4 382 3888

Wilhelmsen Ships Service AS, Willem Barentszstraat 50 3165 AB Rotterdam-Albrandswaard, the Netherlands. Tel (+31) 10 4877 777

