

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

1.1. Product identifier

| | |
|------------------------|--|
| Product form | : Substance |
| Name | : R-152a (AEROSOL) |
| Chemical name | : 1,1-Difluoroéthane |
| EC-No. | : 200-866-1 |
| CAS-No. | : 75-37-6 |
| REACH registration No. | : 01-2119474440-43 |
| Product code | : 100015201 |
| Synonyms | : HFC 152a (AEROSOL) / NOVASPRAY HFC 152a (AEROSOL) / NOVEXPANS HFC 152a (AEROSOL) |

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

1.2.1. Relevant identified uses

| | |
|------------------------------|---|
| Use of the substance/mixture | : Refrigerant Aerosol jet Blowing agent |
|------------------------------|---|

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Dehon Service SAS
 26 Avenue du Petit Parc
 94683 VINCENNES Cedex
 France
 T 01 43 98 75 00, F 01 43 98 21 51
ContactFDS@climalife.dehon.com

Other

Climalife Hongrie Kft
 Villányi út 47
 1118 Budaörs
 Hungary
 T (36) 23 431 660, F (36) 23 431 661
ContactFDS@climalife.dehon.com

Other

Climalife Supplied by Inventec Performance Chemicals Italia SRL
 Via del Lavoro, 10/G
 20874 Busnago MB
 Italia
 T +39 39-5973480, F +39 39-5973490
ContactFDS@climalife.dehon.com

Other

Dehon nordic service
 Östra Hamngatan 50B 3tr
 41109 GÖTEBORG
 Sweden
 T 00 46 735 01 90 50
ContactFDS@climalife.dehon.com

Other

Dehon Service Nerderland B.V.
 Van Konijnenburgweg 84
 NL-4612 PL Bergen Op Zoom
 Netherlands

Other

Galco s.a/n.v.
 Avenue Carton de Wiart, 79
 1090 BRUSSELS
 Belgium
 T 00 32 2 421 01 84 , F 00 32 2 421 01 84 / 00 32 2 425 38 12
ContactFDS@climalife.dehon.com

Other

Climalife Kft Budepesta sucurcala Bucuresti Romania
 Bulevardul Hristo Botev, Nr. 28,
 Biroul NR 4, Modulul I
 Bucuresti Sectorul 3
 Romania
ContactFDS@climalife.dehon.com

Other

Dehon Kälte-Fachvertriebs GmbH
 Robert-Bosch-Strasse 14
 40668 MEERBUSCH
 Germany
 T 00 49 2150 7073 0 , F 00 49 2150 7073 17
ContactFDS@climalife.dehon.com

Other

Dehon Service Belgium s.a/n.v.
 Avenue Carton de Wiart, 79
 1090 Bruxelles
 Belgium
 T 00 32 2 421 01 70, F 00 32 2 426 96 62
ContactFDS@climalife.dehon.com

Other

Friogas sa
 Poligono Industrial SEPES
 Parcela 10
 46500 SAGUNTO (Valencia)
 Spain

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T 00 31 164 212 830, F 00 31 164 212 831

ContactFDS@climalife.dehon.com

Other

IDS Refrigeration Limited
22 Apex Court, Woodlands, Bradley Stoke
BS32 4JT Bristol

United Kingdom

T 00 44 1179 802520, F 00 44 1179 802521

ContactFDS@climalife.dehon.com

T 00 34 9 6 266 36 32, F 00 34 9 6 266 50 25

ContactFDS@climalife.dehon.com

Other

Prochimac SA
ZI Petits Champs 15
CH-1400 Yverdon-les-Bains

Switzerland

T 00 41 32 727 36 00, F 00 41 32 727 36 19

ContactFDS@climalife.dehon.com

1.4. Emergency telephone number

Emergency number : +33 (0) 1 72 11 00 03

| Country/Area | Organisation/Company | Address | Emergency number | Comment |
|----------------|--|------------------------|------------------|-----------------------------------|
| United Kingdom | National Poisons Information Service (Birmingham Centre) City Hospital | Dudley Road B18 7QH | 0344 892 0111 | Only for healthcare professionals |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosol 1 H222;H229

Full text of hazard classes, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. Contact with the liquid may cause frostbite and serious damage to eyes.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P211 - Do not spray on an open flame or other ignition source.

P251 - Do not pierce or burn, even after use.

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 122 °F, 50 °C.

Extra phrases :

Greenhouse fluorinated gas falling within Kyoto Protocol (GWP=124).

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

| Component | |
|---|------------------------------|
| Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII | 1,1-Difluoroethane (75-37-6) |
| Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | 1,1-Difluoroethane (75-37-6) |

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SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : R-152a (AEROSOL)
CAS-No. : 75-37-6
EC-No. : 200-866-1

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--------------------|---|-----|---|
| 1,1-Difluoroethane | CAS-No.: 75-37-6 EC-No.: 200-866-1 REACH-no: 01-2119474440-43 | 100 | Flam. Gas 1A, H220 Press. Gas (Liq.), H280 |

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Move the affected person away from the contaminated area and into the fresh air. If you feel unwell, seek medical advice.
First-aid measures after skin contact : In the event of contact with the liquid: treat resulting frostbite as a burn. Rinse with plenty of water. Do not remove clothing (since it may stick to the skin). If skin burns appear, call a doctor immediately.
First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Consult an eye specialist immediately.
First-aid measures after ingestion : Not specifically applicable (gas).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : CNS depression. Narcosis. Cardiac disorders. Lack of oxygen: risk of death.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).
Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable gas. Heating will cause a rise in pressure with a risk of bursting. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Hazardous decomposition products in case of fire : Thermal decomposition generates : Carbon oxides (CO, CO₂), Hydrogen halogenides, Carbonyl halogenides, fluorinated compounds.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers.
Protection during firefighting : Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not attempt to take action without suitable protective equipment. Avoid contact with skin and eyes. Do not breathe smoke. Do not smoke. Evacuate personnel to a safe area. Ventilate spillage area. Stop leak without risks if possible.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Product evaporates rapidly when in contact with the air. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Other information : Mechanically ventilate the spillage area.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Ensure good ventilation of the work station. Do not pierce or burn, even after use. Use non-sparking tools. Do not use joint paste that may contain peroxides.

Hygiene measures : Do not drink, eat or smoke in the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tight closed. Store : in a cool, well-ventilated area. Store in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

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EU - Indicative Occupational Exposure Limit (IOEL)

| | |
|----------|------------------------|
| IOEL TWA | 4240 mg/m ³ |
| | 1000 ppm |

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

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8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses with side shields

8.2.2.2. Skin protection

Skin and body protection:

Majority cotton protective clothing

Hand protection:

Leather protective gloves. Nitrile-rubber protective gloves. VITON gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In the event of insufficient ventilation: Gas mask with filter type AX. In a confined area : Self-contained breathing apparatus

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state | : Gas |
| Colour | : Colourless. |
| Appearance | : Liquefied gas. |
| Molecular mass | : 66.1 g/mol |
| Odour | : slightly ethereal. |
| Odour threshold | : Not available |
| Melting point | : -117 °C |
| Freezing point | : Not applicable |
| Boiling point | : -24.7 °C |
| Flammability | : Extremely flammable gas. |
| Explosive properties | : Not explosive material according to EC criteria. |
| Oxidising properties | : Non oxidizing material according to EC criteria. |
| Lower explosion limit | : 3.9 vol % |
| Upper explosion limit | : 16.9 vol % |
| Flash point | : < -50 °C |
| Auto-ignition temperature | : 440 °C |
| Decomposition temperature | : Not available |
| pH | : Not applicable |
| Viscosity, kinematic | : 0.253 mm ² /s |
| Viscosity, dynamic | : 0.23 mPa·s (25°C) |
| Solubility | : Poorly soluble in water. Water: 0.28 % (25°C) |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Partition coefficient n-octanol/water (Log Pow) | : 1.13 |

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| | |
|---------------------------------|---------------------------------|
| Vapour pressure | : 4.2 bar (20°C) |
| Vapour pressure at 50°C | : 10.9 bar (50°C) |
| Critical pressure | : 44.96 bar |
| Density | : 0.91 g/cm ³ (20°C) |
| Relative density | : Not applicable |
| Relative vapour density at 20°C | : 2.8 |
| Particle characteristics | : Not applicable |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Critical temperature : 113.5 °C

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous polymerization.

10.4. Conditions to avoid

Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Container under pressure. Do not drill or burn even after use. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Do not use joint paste that may contain peroxides. React in contact of alkali metals, Light metals. zinc. Magnesium. Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide. Hydrogen fluoride. Carbonyl halogenides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

| | |
|-----------------------------|------------------|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

1,1-Difluoroethane (75-37-6)

| | |
|-----------------------------|-----------------|
| LC50 Inhalation - Rat [ppm] | > 437500 ppm/4h |
|-----------------------------|-----------------|

| | |
|-----------------------------------|--|
| Skin corrosion/irritation | : Not classified pH: Not applicable |
| Additional information | : Contact with the liquid causes frostbite |
| Serious eye damage/irritation | : Not classified pH: Not applicable |
| Additional information | : Contact with the liquefied gas may cause severe ocular lesions |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |

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| | |
|------------------------|------------------|
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not applicable |

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| | |
|----------------------|--------------------------|
| Viscosity, kinematic | 0.253 mm ² /s |
|----------------------|--------------------------|

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

1,1-Difluoroethane (75-37-6)

| | |
|------------------------------------|---|
| LC50 - Fish [1] | 295.783 mg/l Test organisms (species): other: |
| LC50 - Fish [2] | 719.611 mg/l Test organisms (species): |
| EC50 - Other aquatic organisms [1] | 146.695 mg/l Test organisms (species): other: |
| EC50 72h - Algae [1] | 47.755 mg/l ECOSAR (Relaciones de la actividad de la estructura |
| EC50 96h - Algae [1] | 168.276 mg/l Test organisms (species): |

12.2. Persistence and degradability

R-152a (AEROSOL) (75-37-6)

| | |
|-------------------------------|--------------------|
| Persistence and degradability | Rapidly degradable |
|-------------------------------|--------------------|

1,1-Difluoroethane (75-37-6)

| | |
|-------------------------------|----------------------------|
| Persistence and degradability | Not readily biodegradable. |
|-------------------------------|----------------------------|

12.3. Bioaccumulative potential

R-152a (AEROSOL) (75-37-6)

| | |
|---|------|
| Partition coefficient n-octanol/water (Log Pow) | 1.13 |
|---|------|

1,1-Difluoroethane (75-37-6)

| | |
|---|---------------------------|
| Partition coefficient n-octanol/water (Log Pow) | 1.13 |
| Partition coefficient n-octanol/water (Log Kow) | < 1 |
| Bioaccumulative potential | Bioaccumulation unlikely. |

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12.4. Mobility in soil

1,1-Difluoroethane (75-37-6)

| | |
|--|------|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 4.47 |
|--|------|

12.5. Results of PBT and vPvB assessment

Component

| | |
|---|------------------------------|
| Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII | 1,1-Difluoroethane (75-37-6) |
| Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | 1,1-Difluoroethane (75-37-6) |

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

Other adverse effects : ODP (R-11=1)=0.
Additional information : GWP (CO2=1/100 years) = 124

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Methods of disposal of packaging. Reuse or recycle following decontamination. Destroy at an authorised site.
Additional information : The user's attention is drawn to the possible existence of specific european, national or local regulations regarding disposal. Refer to manufacturer or supplier for information on recovery or recycling.
Ecological information : Must not be discharged to atmosphere. Refer to manufacturer or supplier for information on recovery or recycling.

SECTION 14: Transport information




In accordance with ADR / IMDG / IATA

| ADR | IMDG | IATA |
|---|-----------------------|----------------------------------|
| 14.1. UN number or ID number | | |
| UN 1950 | UN 1950 | UN 1950 |
| 14.2. UN proper shipping name | | |
| AEROSOLS | AEROSOLS | Aerosols, flammable |
| Transport document description | | |
| UN 1950 AEROSOLS, 2.1, (D) | UN 1950 AEROSOLS, 2.1 | UN 1950 Aerosols, flammable, 2.1 |
| 14.3. Transport hazard class(es) | | |
| 2.1 | 2.1 | 2.1 |

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| ADR | IMDG | IATA |
|---|---|---|
|  |  |  |
| 14.4. Packing group | | |
| Not applicable | Not applicable | Not applicable |
| 14.5. Environmental hazards | | |
| Dangerous for the environment: No | Dangerous for the environment: No Marine pollutant: No | Dangerous for the environment: No |
| No supplementary information available | | |

14.6. Special precautions for user

Overland transport

| | |
|-------------------------------|----------------------|
| Classification code (ADR) | : 5F |
| Special provisions (ADR) | : 190, 327, 344, 625 |
| Limited quantities (ADR) | : 1I |
| Transport category (ADR) | : 2 |
| Tunnel restriction code (ADR) | : D |

Transport by sea

| | |
|---------------------------|------------------------------------|
| Special provisions (IMDG) | : 63, 190, 277, 327, 344, 381, 959 |
| Limited quantities (IMDG) | : SP277 |
| EmS-No. (Fire) | : F-D |
| EmS-No. (Spillage) | : S-U |
| Segregation (IMDG) | : SG69 |

Air transport

| | |
|--|--------------------|
| PCA Limited quantities (IATA) | : Y203 |
| PCA limited quantity max net quantity (IATA) | : 30kgG |
| PCA packing instructions (IATA) | : 203 |
| PCA max net quantity (IATA) | : 75kg |
| CAO packing instructions (IATA) | : 203 |
| CAO max net quantity (IATA) | : 150kg |
| Special provisions (IATA) | : A145, A167, A802 |

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

| EU restriction list (REACH Annex XVII) | |
|--|--------------------|
| Reference code | Applicable on |
| 40. | 1,1-Difluoroethane |

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

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PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Ensure all national/local regulations are observed.

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Other information : For more information regarding the use of this product, please refer to our technical information or contact the sales department in your region.

| Full text of H- and EUH-statements: | |
|-------------------------------------|---|
| Aerosol 1 | Aerosol, Category 1 |
| Flam. Gas 1A | Flammable gases, Category 1A |
| H220 | Extremely flammable gas. |
| H222 | Extremely flammable aerosol. |
| H229 | Pressurised container: May burst if heated. |
| H280 | Contains gas under pressure; may explode if heated. |
| Press. Gas (Liq.) | Gases under pressure : Liquefied gas |

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.