

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 SDS Reference Number: 100003200 Revision date: 3/18/2025 Supersedes version of: 5/23/2023 Version: 10.1

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

1.1. Product identifier

Product form : Substance Name : R-32

Chemical name : 1,1-Difluoromethane (R-32)

EC-No. : 200-839-4 CAS-No. : 75-10-5

REACH registration No. : 01-0000019665-61 100003200 Product code Formula CH2F2

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

Relevant identified uses

Use of the substance/mixture : Refrigerant

1.3. Details of the supplier of the safety data sheet

Dehon Service SAS 26 Avenue du Petit Parc 94683 VINCENNES Cedex

T 01 43 98 75 00, F 01 43 98 21 51 ContactFDS@climalife.dehon.com

Other

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Other

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

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Other

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Climalife Hongrie Kft. Villányi út 47 1118 Budapest Hungary

T (36) 23 431 660

ContactFDS@climalife.dehon.com

Other

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Other

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

Netherlands

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Other

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BS32 4JT Bristol United Kingdom

T 00 44 1179 802520, F 00 44 1179 802521

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Other

Galco s.a/n.v.

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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United Arab Emirates

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Belaium

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Other

Galco Singapore Branch 135 Cecil Street #10-01

Singapore

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1.4. Emergency telephone number

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

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
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]

Flam. Gas 1B H221
Press. Gas (Liq.) H280
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) Hazard statements (CLP)

Precautionary statements (CLP)

CLP) : Danger

: H221 - Flammable gas.

H280 - Contains gas under pressure; may explode if heated.

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

No smoking.

P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 - In case of leakage, eliminate all ignition sources.

P403 - Store in a well-ventilated place.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Extra phrases : Greenhouse fluorinated gas falling within Kyoto Protocol (GWP=675).

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

 Name
 : R-32

 CAS-No.
 : 75-10-5

 EC-No.
 : 200-839-4

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Difluoromethane	CAS-No.: 75-10-5 EC-No.: 200-839-4 REACH-no: 01-2119471312- 47	100	Flam. Gas 1B, H221 Press. Gas (Liq.), H280

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

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 : 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 gas/vapours are formed in the event of decomposition (see section 10).

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers.

3/18/2025 (Revision date) EU - en 3/11

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Protection during firefighting : Self-contained breathing apparatus. Complete protective clothing.

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.

6.2. 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.

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.

Incompatible materials : Strong oxidizing agents. alkali metals. Alkaline earth metals.

Packaging materials : Recommended materials Carbon steel. Unsuitable materials: Alloys containing more than

2% magnesium.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Difluoromethane (75-10-5)		
EU - Indicative Occupational Exposure Limit (IOEL)		
IOEL TWA 2200 mg/m³ (recommended)		
	1000 ppm (recommended)	

DNEL and PNEC

Difluoromethane (75-10-5)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, inhalation 7035 mg/m³		

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Difluoromethane (75-10-5)		
DNEL/DMEL (General population)		
Long-term - systemic effects, inhalation 750 mg/m³		
PNEC (Water)		
PNEC aqua (freshwater) 0.142 mg/l		
PNEC (Sediment)		
PNEC sediment (freshwater) 0.534 mg/kg dwt		

8.2. Exposure controls

Personal protection equipment

Eye and face protection

Eye protection:

Safety glasses with side shields

Skin protection

Skin and body protection:

Majority cotton protective clothing

Hand protection:

Vapour pressure

Vapour pressure at 50°C

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

Respiratory protection

Respiratory protection:

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Gas Colour : Colourless. : Liquefied gas. Appearance Molecular mass : 52.02 g/mol Odour : slightly ethereal. Odour threshold : Not available : -136.81 °C Melting point : Not applicable Freezing point : -51.65 °C Boiling point Flammability : Flammable gas.

Explosive properties : Not explosive material according to EC criteria. Oxidising properties : Non oxidizing material according to EC criteria.

: 12.7 vol % Lower explosion limit Upper explosion limit : 33.4 vol % Flash point : < -50 °C

Auto-ignition temperature : 530 °C (1.018 hPa)

Decomposition temperature : > 250 °C рΗ : Not applicable Viscosity, kinematic : Not applicable

Solubility : Insoluble in water. Soluble in alcohols. Water: 1.6 g/l (25°C)

Partition coefficient n-octanol/water (Log Kow) : Not available : 16.9 bar (25°C) : 31.4 bar

Critical pressure : 57.82 bar Density : 0.959 g/cm³ (25°C) Relative density : Not applicable

Relative vapour density at 20°C : 2.987

3/18/2025 (Revision date) EU - en 5/11

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

: Not applicable Particle characteristics

9.2. Other information

Information with regard to physical hazard classes

Critical temperature : 78.1 °C

Other safety characteristics

VOC content : 100 %

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

Strong oxidizing agents. alkali metals. Alkaline earth metals. Metallic powders. Metallic salts.

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

Difluoromethane (75-10-5)

> 520000 ppm/4h LC50 Inhalation - Rat [ppm]

Skin corrosion/irritation : Not classified

pH: Not applicable

Additional information Contact with the liquid causes frostbite

Difluoromethane (75-10-5)

рΗ

Serious eye damage/irritation : Not classified

pH: Not applicable

Additional information : Contact with the liquefied gas may cause severe ocular lesions

N/A

Difluoromethane (75-10-5)

N/A рΗ

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Not classified Carcinogenicity

3/18/2025 (Revision date) 6/11 EU - en

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Reproductive toxicity : Not classified STOT-single exposure : Not classified STOT-repeated exposure : Not classified

Difluoromethane (75-10-5)

NOAEC (inhalation, rat, gas, 90 days) 50000 ppmv/6h/day

Aspiration hazard : Not applicable

11.2. Information on other hazards

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

SECTION 12: Ecological information

12.1. Toxicity

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

(acute)

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

(chronic)

Difluoromethane (75-10-5)		
LC50 - Fish [1]	> 81.8 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)	
EC50 - Crustacea [1]	> 97.9 mg/l Test organisms (species): Daphnia magna	
EC50 - Crustacea [2]	> 97.9 mg/l Daphnia magna	
EC50 72h - Algae [1]	> 118 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
EC50 72h - Algae [2]	> 114 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
EC50 96h - Algae [1]	313 mg/l	

12.2. Persistence and degradability

R-32 (75-10-5)		
Persistence and degradability Not established.		
Difluoromethane (75-10-5)		
Persistence and degradability Rapidly degradable		
Biodegradation	5 %	

12.3. Bioaccumulative potential

Difluoromethane (75-10-5)	
Partition coefficient n-octanol/water (Log Pow)	0.21

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

3/18/2025 (Revision date) EU - en 7/11

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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.

R-32 (75-10-5)
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Other information GWP (CO2=1/100 years) = 675

Difluoromethane (75-10-5)

Other information GWP (CO2=1/100 years) = 675

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 waste 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 / RID

Taccordance with ADR / IMDG / IATA / RID					
ADR	IMDG	IATA	RID		
14.1. UN number or ID number	14.1. UN number or ID number				
UN 3252	UN 3252	UN 3252	UN 3252		
14.2. UN proper shipping nam	е				
DIFLUOROMETHANE (REFRIGERANT GAS R 32)	DIFLUOROMETHANE (REFRIGERANT GAS R 32)	Difluoromethane	DIFLUOROMETHANE (REFRIGERANT GAS R 32)		
Transport document description					
UN 3252 DIFLUOROMETHANE (REFRIGERANT GAS R 32), 2.1, (B/D)	UN 3252 DIFLUOROMETHANE (REFRIGERANT GAS R 32), 2.1	UN 3252 Difluoromethane, 2.1	UN 3252 DIFLUOROMETHANE (REFRIGERANT GAS R 32), 2.1		
14.3. Transport hazard class(e	es)				
2.1	2.1	2.1	2.1		
			2		
14.4. Packing group					
Not applicable	Not applicable	Not applicable	Not applicable		

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

ADR	IMDG	IATA	RID
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-D EmS-No. (Spillage): S-U	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

23

14.6. Special precautions for user

Overland transport

Classification code (ADR) : 2F
Special provisions (ADR) : 662
Limited quantities (ADR) : 0
Tank code (ADR) : PxBN(M)
Transport category (ADR) : 2
Hazard identification number (Kemler No.) : 23

Hazard identification number (Kemler No.) :
Orange plates :

3252

Tunnel restriction code (ADR) : B/D EAC code : 2YE

Transport by sea

Limited quantities (IMDG) : 0

Air transport

PCA Limited quantities (IATA) : Forbidden
PCA limited quantity max net quantity (IATA) : Forbidden
PCA packing instructions (IATA) : Forbidden
PCA max net quantity (IATA) : Forbidden
CAO packing instructions (IATA) : 200
CAO max net quantity (IATA) : 150kg
Special provisions (IATA) : A1

Rail transport

Classification code (RID) : 2F
Special provisions (RID) : 662
Limited quantities (RID) : 0
Tank codes for RID tanks (RID) : PxBN(M)
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE3
Hazard identification number (RID) : 23

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

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 (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive (2004/42)

VOC content : 100 %

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)

National regulations

Ensure all national/local regulations are observed.

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
	Adverse health effects caused by endocrine disrupting properties	Added
3	Composition/information on ingredients	Modified
9	Solubility	Modified
9	VOC content	Added
9	Molecular mass	Added
9	Melting point	Modified
9	Relative vapour density at 20°C	Modified
9	Flash point	Modified
9	Boiling point	Modified
9	Vapour pressure at 50°C	Added
9	Solubility in water	Added
9	Partition coefficient n-octanol/water (Log Pow)	Added
9	Critical pressure	Added
9	Auto-ignition temperature	Added
9.1	Critical temperature	Modified
9.1	Decomposition temperature	Added

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Indication of changes		
Section	Changed item	Comments
12.2	Persistence and degradability	Added
12.2	Biodegradation	Added
12.6	Adverse effects on the environment caused by endocrine disrupting properties	Added

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:		
Flam. Gas 1B	Flammable gases, Category 1B	
Press. Gas (Liq.)	Gases under pressure : Liquefied gas	
H221	Flammable gas.	
H280	Contains gas under pressure; may explode if heated.	

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.