Solstice® L40X (R-455A)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
SDS Reference Number: 100145100
Revision date: 12/4/2024 Supersedes version of: 2/19/2021 Version: 3.0

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

1.1. Product identifier

Product form	:	Mixture
Name	:	Solstice® L40X (R-455A)
UFI	:	FY10-90KM-600U-D2UJ
Product code	:	100145100

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

Relevant identified uses

Main use category	:	Professional use,Consumer use
Use of the substance/mixture	:	Refrigerant

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 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
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

Other
Climalife Hongrie Kft.
Villányi út 47
1118 Budapest
Hungary
T (36) 23 431 660
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
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

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 Asia Corporation
Room 302-A82, No.3, Building 1509, Xin Zhen Road,
201101 Shanghai , Minhang District
China
T +86 21 6442 3972 , F +86 21 6442 3952
ContactFDS@climalife.dehon.com

Other
Teknalys Middle East FZCO
B34BS33O203, Jebel Ali Freezone
Dubai
United Arab Emirates
ContactFDS@climalife.dehon.com

Other
Galco Singapore Branch
135 Cecil Street #10-01
Singapore
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
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) : Danger
Hazard statements (CLP) : H221 - Flammable gas.
H280 - Contains gas under pressure; may explode if heated.
Precautionary statements (CLP) : P210 - Keep away from heat, open flames, hot surfaces, sparks. – 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.
Extra phrases : Greenhouse fluorinated gas falling within Kyoto Protocol (GWP=146).

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 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	2,3,3,3-Tetrafluoroprop-1-ene (754-12-1), Carbon dioxide (124-38-9)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	2,3,3,3-Tetrafluoroprop-1-ene (754-12-1), Carbon dioxide (124-38-9)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are 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 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,3,3,3-Tetrafluoroprop-1-ene	CAS-No.: 754-12-1 EC-No.: 468-710-7 REACH-no: 01-0000019665-61	75.5	Flam. Gas 1B, H221 Press. Gas (Liq.), H280
Difluoromethane	CAS-No.: 75-10-5 EC-No.: 200-839-4 REACH-no: 01-2119471312-47	21.5	Flam. Gas 1B, H221 Press. Gas (Liq.), H280
Carbon dioxide substance with national workplace exposure limit(s) (IE, GB); substance with a Community workplace exposure limit	CAS-No.: 124-38-9 EC-No.: 204-696-9 REACH-no: Exempted Art 2(7)(a) - Annex IV (*)	3	Press. Gas (Liq.), H280

(*) REACH registration exemptions (full phrase explanation) See section 15
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 : 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 gas/vapours are formed in the event of decomposition (see section 10).
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.

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.

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.
Incompatible materials : Strong oxidizing agents. Finely divided aluminium. Magnesium and its alloys. Zinc and its alloys.

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)

2,3,3,3-Tetrafluoroprop-1-ene (754-12-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	500 ppm (recommended)

Carbon dioxide (124-38-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Carbon dioxide
IOEL TWA	9000 mg/m³
	5000 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Ireland - Occupational Exposure Limits	
Local name	Carbon dioxide
OEL TWA	9000 mg/m³
	5000 ppm
OEL STEL	27000 mg/m³
	15000 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
United Kingdom - Occupational Exposure Limits	
Local name	Carbon dioxide
WEL TWA (OEL TWA)	9150 mg/m³
	5000 ppm
WEL STEL (OEL STEL)	27400 mg/m³
	15000 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

DNEL and PNEC

Difluoromethane (75-10-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	7035 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	750 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0.142 mg/l

Difluoromethane (75-10-5)	
PNEC (Sediment)	
PNEC sediment (freshwater)	0.534 mg/kg dwt

2,3,3,3-Tetrafluoroprop-1-ene (754-12-1)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	186400 mg/m³
Long-term - systemic effects, inhalation	950 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	186400 mg/m³
Long-term - systemic effects, inhalation	113.1 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0.1 mg/l
PNEC aqua (marine water)	0.01 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	1.51 mg/kg dwt
PNEC sediment (marine water)	0.151 mg/kg dwt
PNEC (Soil)	
PNEC soil	1.49 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:
cold-insulating 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.
Appearance	:	Press. Gas (Liq.).
Odour	:	slightly ethereal.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not applicable
Boiling point	:	-52.03 °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	:	11.8 vol %
Upper explosion limit	:	12.9 vol %
Flash point	:	Not applicable
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not applicable
Viscosity, kinematic	:	Not applicable
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	13.85 bar (25°C)
Vapour pressure at 50°C	:	24.43 bar (50°C)
Critical pressure	:	46.54 bar
Density	:	1.033 g/cm³ (25°C)
Relative density	:	Not applicable
Relative vapour density at 20°C	:	4.747
Particle characteristics	:	Not applicable

9.2. Other information

Information with regard to physical hazard classes

Critical temperature	:	85.61 °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

Do not use joint paste that may contain peroxides. Strong oxidizing agents. Finely divided aluminium. Magnesium. zinc.

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

2,3,3,3-Tetrafluoroprop-1-ene (754-12-1)	
LC50 Inhalation - Rat [ppm]	> 400000 ppm/4h

Skin corrosion/irritation : Not classified
pH: Not applicable
Additional information : Contact with the liquid causes frostbite

Difluoromethane (75-10-5)	
pH	N/A

Serious eye damage/irritation : Not classified
pH: Not applicable
Additional information : Contact with the liquefied gas may cause severe ocular lesions

Difluoromethane (75-10-5)	
pH	N/A

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

2,3,3,3-Tetrafluoroprop-1-ene (754-12-1)	
NOAEL (subacute, dermal, 28 days)	> mg/kg bodyweight/day
NOAEL (subacute, dermal, animal/male, 28 days)	> mg/kg bodyweight/day

Aspiration hazard : Not applicable

11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) 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 at a concentration equal to or greater than 0,1 %

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

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

Difluoromethane (75-10-5)	
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

2,3,3,3-Tetrafluoroprop-1-ene (754-12-1)	
LC50 - Fish [1]	> 197 mg/l Test organisms (species): Cyprinus carpio
LC50 - Fish [2]	33 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	65 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	> 2.5 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
LOEC (chronic)	> 15.2 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	15.2 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	2.7 mg/l Test organisms (species): Cyprinus carpio Duration: '28 d'

12.2. Persistence and degradability

Solstice® L40X (R-455A)	
Persistence and degradability	Not established.

Difluoromethane (75-10-5)	
Persistence and degradability	Rapidly degradable
Biodegradation	5 %

2,3,3,3-Tetrafluoroprop-1-ene (754-12-1)	
Persistence and degradability	Not readily biodegradable.

Carbon dioxide (124-38-9)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

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

2,3,3,3-Tetrafluoroprop-1-ene (754-12-1)	
Partition coefficient n-octanol/water (Log Pow)	2.15

Carbon dioxide (124-38-9)	
Partition coefficient n-octanol/water (Log Kow)	0.83

12.4. Mobility in soil

Carbon dioxide (124-38-9)	
Ecology - soil	Highly volatile product.

12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	2,3,3,3-Tetrafluoroprop-1-ene (754-12-1), Carbon dioxide (124-38-9)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	2,3,3,3-Tetrafluoroprop-1-ene (754-12-1), Carbon dioxide (124-38-9)

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) 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 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

Other adverse effects : ODP (R-11=1)=0.
Additional information : GWP (CO2=1/100 years) = 146

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

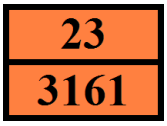
ADR	IMDG	IATA
14.1. UN number or ID number		
UN 3161	UN 3161	UN 3161
14.2. UN proper shipping name		
LIQUEFIED GAS, FLAMMABLE, N.O.S. (2,3,3,3-Tetrafluoroprop-1-ene ; Difluoromethane ; Carbon dioxide)	LIQUEFIED GAS, FLAMMABLE, N.O.S. (2,3,3,3-Tetrafluoroprop-1-ene ; Difluoromethane ; Carbon dioxide)	Liquefied gas, flammable, n.o.s. (2,3,3,3-Tetrafluoroprop-1-ene ; Difluoromethane ; Carbon dioxide)
Transport document description		
UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (2,3,3,3-Tetrafluoroprop-1-ene ; Difluoromethane ; Carbon dioxide), 2.1, (B/D)	UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (2,3,3,3-Tetrafluoroprop-1-ene ; Difluoromethane ; Carbon dioxide), 2.1	UN 3161 Liquefied gas, flammable, n.o.s. (2,3,3,3-Tetrafluoroprop-1-ene ; Difluoromethane ; Carbon dioxide), 2.1
14.3. Transport hazard class(es)		
2.1	2.1	2.1
		

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 EmS-No. (Fire): F-D EmS-No. (Spillage): S-U	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

Overland transport

Classification code (ADR) : 2F
Special provisions (ADR) : 274, 662
Limited quantities (ADR) : 0
Tank code (ADR) : PxBN(M)
Transport category (ADR) : 2
Hazard identification number (Kemler No.) : 23
Orange plates :



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

Transport by sea

Special provisions (IMDG) : 274
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

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 registration exemptions (full phrase explanation)	
Component name	**REACH Registration exemption information**
Carbon dioxide	This substance is exempted from Registration according to the provisions of Article 2(7)(a) and Annex IV of REACH

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
40.	Difluoromethane ; 2,3,3,3-Tetrafluoroprop-1-ene

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

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**
	Issue date	**Added**
	Supersedes	**Modified**
	Revision date	**Modified**
	Adverse health effects caused by endocrine disrupting properties	**Added**
2.2	Precautionary statements (CLP)	**Modified**
2.2	Extra phrases	**Modified**
3	Composition/information on ingredients	**Modified**
9	VOC content	**Added**
12.2	Persistence and degradability	**Added**

Indication of changes		
Section	**Changed item**	**Comments**
12.6	Adverse effects on the environment caused by endocrine disrupting properties	**Added**
15.1	REACH Annex XVII	**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
H221	Flammable gas.
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.