

**Trade name:** R 407F

**Current version :** 1.0.0, issued: 30.07.2025

**Replaced version:** -, issued: -

**Region:**  
GER

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

### 1.1 Product identifier

**Trade name**

**R 407F**

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

**Relevant identified uses of the substance or mixture**

Refrigerant

**Uses advised against**

Consumer use

### 1.3 Details of the supplier of the safety data sheet

**Address**

TEGA - Technische Gase und Gasetechnik GmbH  
Werner-von-Siemens-Straße 18  
97076 Würzburg

Telephone no. +49 931 2093-220

Fax no. +49 931 2093-180

e-mail kaeltmittel@tega.de

**Advice on Safety Data Sheet**

sdb\_info@umco.de

### 1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

Press. Gas liq.; H280

**Classification information**

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)**

**Hazard pictograms**



GHS04

**Signal word**

Warning

**Hazard statement(s)**

H280

Contains gas under pressure; may explode if heated.

**Precautionary statement(s)**

P410+P403

Protect from sunlight. Store in a well-ventilated place.

**Supplemental label elements**

Contains fluorinated greenhouse gases.

**2.3 Other hazards**

This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Vapours are heavier than air and can cause asphyxiation by displacing the oxygen in the air. Contact with the liquid can cause cold burns or frostbite.

**PBT assessment**

The product is not considered to be a PBT.

**vPvB assessment**

The product is not considered to be a vPvB.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable. The product is not a substance.

**3.2 Mixtures****Hazardous ingredients**

No	Substance name	Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration
			%
1	<b>norflurane</b>		
	811-97-2 212-377-0 - 01-2119459374-33	Press. Gas liq.; H280	40,00 Vol%
2	<b>pentafluoroethane</b>		
	354-33-6 206-557-8 - 01-2119485636-25	Press. Gas liq.; H280	30,00 Vol%
3	<b>difluoromethane</b>		
	75-10-5 200-839-4 - 01-2119471312-47	Flam. Gas 1B; H221 Press. Gas liq.; H280	30,00 Vol%

Full text of H- and EUH-phrases, if not already mentioned in section 2.2: see section 16.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information**

Remove soiled or soaked clothing immediately. Adhere to personal protective measures when giving first aid.

**After inhalation**

Remove affected persons from dangerous area by observing suitable respiratory protection measures. Ensure supply of fresh air. Irregular breathing/no breathing: artificial respiration. Call a doctor immediately.

**After skin contact**

In case of contact with skin wash off immediately with soap and water. Rinse with much water in case of frostbites. Remove clothes only after unfreezing. Cover wounds with sterile dressing. Call a doctor immediately.

**After eye contact**

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Seek medical assistance.

**After ingestion**

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Rinse the mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor. Unlikely route of exposure.

**4.2 Most important symptoms and effects, both acute and delayed****Effects**

Gas reduces oxygen available for breathing. Contact with liquid or refrigerated gas can cause cold burns and frostbite.

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

Treat symptomatically. Do not administer adrenaline or derivatives.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Alcohol resistant foam, CO<sub>2</sub>, powders, water spray; Extinguishing measures to suit surroundings.

**Unsuitable extinguishing media**

High power water jet

**5.2 Special hazards arising from the substance or mixture**

In the event of fire, the following can be released: Carbon monoxide and carbon dioxide; Hydrogen fluoride (HF); Carbonyl fluoride; Liquefied gas: Spilled liquid can cause cold burns. This gas is heavier than air and may accumulate in low areas.

**5.3 Advice for firefighters**

Use self-contained breathing apparatus. Wear full protective suit. Containers close to fire should be transferred to a safe place. Cool closed containers exposed to fire with water. Pressure increase, bursting and explosion hazard during heating. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Remove persons to safety. Provide good room ventilation even at ground level (vapours are heavier than air). Use personal protective clothing. Do not breathe gas. Avoid skin contact with leaking liquid (danger of frostbite!).

**For emergency responders**

No data available. Personal protective equipment (PPE) - see Section 8.

**6.2 Environmental precautions**

Avoid release in the environment. Suppress gases/vapours/mists with water spray jet.

**6.3 Methods and material for containment and cleaning up**

Ensure adequate ventilation. Dispose of absorbed material in accordance with the regulations.

**6.4 Reference to other sections**

Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Advice on safe handling**

Only qualified and trained persons are authorised to handle. Provide good ventilation at the work area (local exhaust ventilation, if necessary). To be used only according to instructions for use. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers heat or sources of ignition. In case of accidental release: danger due to low temperature of the liquid product. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Comply with the health and safety at work laws.

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Do not eat, drink or smoke during work time. Wash hands before breaks and after work. Keep away from foodstuffs and beverages. Do not inhale gases. Provide eye wash fountain in work area. Have emergency shower available.

**Advice on protection against fire and explosion**

The product is not combustible. The substance can form a combustible mixture with air at elevated pressure. Isolate from sources of heat, sparks and open flame. Take precautionary measures against electrostatic loading (earthing necessary during loading operations). Electrical equipment should be protected to the appropriate standard.

**7.2 Conditions for safe storage, including any incompatibilities****Technical measures and storage conditions**

Keep container tightly closed in a cool, well-ventilated place, open and handle carefully. Protect from heat and direct sunlight.

**Requirements for storage rooms and vessels**

Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original.

**Incompatible products**

Substances to be avoided, see section 10.

**Stoarge Class according TRGS 510**

2A Gases (except aerosol dispensers and lighters)

**7.3 Specific end use(s)**

No data available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational exposure limit values**

No	Substance name	CAS no.	EC no.
1	<b>norflurane</b>	<b>811-97-2</b>	<b>212-377-0</b>
	<b>TRGS 900</b>		
	Norfluran		
	WEL long-term (8-hr TWA reference period)	4200	mg/m <sup>3</sup> 1000 ml/m <sup>3</sup>
	Ceiling Limit	8(II)	
	Notes	Y	

**Biological limit values**

No	Substance name
1	<b>pentafluoroethane</b>
	<b>TRGS 903</b>
	Fluorwasserstoff und anorganische Fluorverbindungen (Fluoride)
	parameter Fluorid
	Value 7,0 mg/g Kreatinin
	sample material U
	Sampling moment b
	<b>TRGS 903</b>
	Fluorwasserstoff und anorganische Fluorverbindungen (Fluoride)
	parameter Fluorid
	Value 4,0 mg/g Kreatinin
	sample material U
	Sampling moment d

**DNEL, DMEL and PNEC values****DNEL values (worker)**

No	Substance name	CAS / EC no
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	Route of exposure	Exposure time	Effect	Value
1	<b>norflurane</b>			<b>811-97-2</b> <b>212-377-0</b>
	inhalative	Long term (chronic)	systemic	13936 mg/m <sup>3</sup>
2	<b>pentafluoroethane</b>			<b>354-33-6</b> <b>206-557-8</b>
	inhalative	Long term (chronic)	systemic	16444 mg/m <sup>3</sup>
3	<b>difluoromethane</b>			<b>75-10-5</b> <b>200-839-4</b>
	inhalative	Long term (chronic)	systemic	7035 mg/m <sup>3</sup>

**DNEL value (consumer)**

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	<b>norflurane</b>			<b>811-97-2</b> <b>212-377-0</b>
	inhalative	Long term (chronic)	systemic	2476 mg/m <sup>3</sup>
2	<b>pentafluoroethane</b>			<b>354-33-6</b> <b>206-557-8</b>
	inhalative	Long term (chronic)	systemic	1753 mg/m <sup>3</sup>
3	<b>difluoromethane</b>			<b>75-10-5</b> <b>200-839-4</b>
	inhalative	Long term (chronic)	systemic	750 mg/m <sup>3</sup>

**PNEC values**

No	Substance name			CAS / EC no
	ecological compartment	Type		Value
1	<b>norflurane</b>			<b>811-97-2</b> <b>212-377-0</b>
	water	fresh water		0,1 mg/L
	water	marine water		0,01 mg/L
	water	fresh water sediment		0,75 mg/kg dry weight
	sewage treatment plant	-		73 mg/L
2	<b>pentafluoroethane</b>			<b>354-33-6</b> <b>206-557-8</b>
	water	fresh water		0,1 mg/L
	water	fresh water sediment		0,6 mg/kg dry weight
3	<b>difluoromethane</b>			<b>75-10-5</b> <b>200-839-4</b>
	water	fresh water		0,313 mg/L
	water	fresh water sediment		1,807 mg/kg dry weight

**8.2 Exposure controls****Appropriate engineering controls**

Ensure adequate ventilation, local exhaust at the work station if necessary.

**Personal protective equipment****Respiratory protection**

Self-contained breathing apparatus. In case of insufficient ventilation or long-term effect use breathing apparatus.  
Danger of suffocation due to high concentrations in breathing air.

**Eye / face protection**

Tightly fitting safety glasses (EN 166).

**Hand protection**

Low-temperature-resistant gloves (EN 511). Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material                      Leather

**Other**

Chemical-resistant work clothes. Protective shoes.

**Environmental exposure controls**

No data available.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

<b>State of aggregation</b>	
gas	
<b>Form</b>	
clear	
<b>Colour</b>	
colourless	
<b>Odour</b>	
characteristic	
<b>pH value</b>	
Source	supplier
Comments	neutral
<b>Boiling point / boiling range</b>	
Value	-45,5 °C
Reference pressure	1013 hPa
Source	supplier
<b>Melting point/freezing point</b>	
No data available	
<b>Decomposition temperature</b>	
No data available	
<b>Flash point</b>	
Not applicable	
Source	supplier
<b>Ignition temperature</b>	
No data available	
<b>Flammability</b>	
The product is non-flammable.	
Source	supplier
<b>Lower explosion limit</b>	
none	
Source	supplier
<b>Upper explosion limit</b>	
none	
Source	supplier
<b>Vapour pressure</b>	

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Value	10218 hPa
Reference temperature	21,1 °C
Source	supplier

<b>Relative vapour density</b>
No data available

<b>Relative density</b>
No data available

<b>Density</b>
No data available

<b>Solubility</b>
No data available

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	norflurane	811-97-2	212-377-0
	log Pow	1,06	
	Reference temperature	25	°C
	with reference to	pH 6.0	
	Method	OECD 107	
	Source	ECHA	
2	pentafluoroethane	354-33-6	206-557-8
	log Pow	1,48	
	Reference temperature	25	°C
	with reference to	pH 6.34	
	Method	OECD 107	
	Source	ECHA	
3	difluoromethane	75-10-5	200-839-4
	log Pow	0,21	
	Reference temperature	25	°C
	with reference to	pH 6,1	
	Method	OECD 107	
	Source	ECHA	

<b>Kinematic viscosity</b>
No data available

<b>Particle characteristics</b>
No data available

**9.2 Other information**

<b>Other information</b>
No data available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Dangerous reactions are not expected if the product is handled according to its intended use.

**10.2 Chemical stability**

Stable under recommended storage and handling conditions (See section 7).

**10.3 Possibility of hazardous reactions**

Stable under recommended storage and handling conditions (See section 7).

**10.4 Conditions to avoid**

Temperatures &gt; 50°C. Heat, naked flames and other ignition sources. Contact with incompatible substances.

**10.5 Incompatible materials**

Oxidizing agents; Metal as powder; Possible incompatibility with alkali-sensitive substances.

**10.6 Hazardous decomposition products**

None if stored, handled and transported properly. In case of fire: see section 5.

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute oral toxicity			
No data available			
Acute dermal toxicity			
No data available			
Acute inhalational toxicity			
No	Substance name	CAS no.	EC no.
1	pentafluoroethane	354-33-6	206-557-8
LC50	>	800000	ppmV
Duration of exposure		4	h
State of aggregation	Gas		
Species	rat		
Method	OECD 403		
Source	ECHA		
2	difluoromethane	75-10-5	200-839-4
LC50	>	520000	ppmV
Duration of exposure		4	h
State of aggregation	Gas		
Species	rat		
Method	OECD 403		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Skin corrosion/irritation			
No data available			
Serious eye damage/irritation			
No data available			
Respiratory or skin sensitisation			
No data available			
Germ cell mutagenicity			
No	Substance name	CAS no.	EC no.
1	norflurane	811-97-2	212-377-0
Type of examination	Genotoxicity in vitro		
Species	Salmonella typhimurium		
Method	OECD 471		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	Genotoxicity in vitro		
Species	Human Lymphocyte		
Method	OECD 473		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Route of exposure	inhalational		
Type of examination	Genotoxicity in vivo		
Species	mouse		
Method	EPA		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	pentafluoroethane	354-33-6	206-557-8
Type of examination	in vitro gene mutation study in bacteria		



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Species	Salmonella typhimurium / Escherichia coli
Method	OECD 471
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Type of examination	In vitro Mammalian Chromosomal Aberration Test
Species	Chinese hamster Ovary (CHO)
Method	OECD 473
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Route of exposure	inhalational
Type of examination	Mammalian Erythrocyte Micronucleus Test, In vivo
Species	mouse
Method	OECD 474
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
<b>3 difluoromethane</b>	<b>75-10-5</b> <b>200-839-4</b>
Type of examination	in vitro gene mutation study in bacteria
Species	Salmonella typhimurium / Escherichia coli
Method	OECD 471
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Type of examination	In vitro Mammalian Chromosomal Aberration Test
Species	Human Lymphocyte
Method	OECD 473
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Route of exposure	inhalational
Duration of exposure	6 h
Type of examination	In vivo mammalian somatic cell study: cytogenicity / erythrocyte micronucleus
Species	mouse
Method	OECD 474
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.

Reproduction toxicity			
No	Substance name	CAS no.	EC no.
<b>1</b>	<b>norflurane</b>	<b>811-97-2</b>	<b>212-377-0</b>
Route of exposure	inhalational		
Species	mouse		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
<b>2</b>	<b>pentafluoroethane</b>	<b>354-33-6</b>	<b>206-557-8</b>
Route of exposure	inhalational		
Type of examination	Prenatal Developmental Toxicity Study		
Species	rabbit		
Method	OECD 414		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
<b>3</b>	<b>difluoromethane</b>	<b>75-10-5</b>	<b>200-839-4</b>
Route of exposure	inhalational		
NOAEL	50000 ppm		
Type of examination	Prenatal Developmental Toxicity Study		
Species	rabbit		
Method	OECD 414		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Carcinogenicity			
No	Substance name	CAS no.	EC no.

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1	<b>norflurane</b>	<b>811-97-2</b>	<b>212-377-0</b>
Route of exposure	inhalational		
Species	rat		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	<b>difluoromethane</b>	<b>75-10-5</b>	<b>200-839-4</b>
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No	Substance name	CAS no.	EC no.
1	<b>norflurane</b>	<b>811-97-2</b>	<b>212-377-0</b>
Route of exposure	inhalational		
Species	rat		
Method	OECD 453		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	<b>pentafluoroethane</b>	<b>354-33-6</b>	<b>206-557-8</b>
Route of exposure	inhalational		
Species	rat		
Method	OECD 413		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
3	<b>difluoromethane</b>	<b>75-10-5</b>	<b>200-839-4</b>
Route of exposure	inhalational		
NOAEL			49100 ppm
Species	rat		
Method	OECD 413		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

**Aspiration hazard**

No data available

**Endocrine disrupting properties**

No data available

**11.2 Information on other hazards****Other information**

Inhalation: May cause cardiac arrhythmia.

**SECTION 12: Ecological information****12.1 Toxicity**

<b>Toxicity to fish (acute)</b>			
No	Substance name	CAS no.	EC no.
1	<b>norflurane</b>	<b>811-97-2</b>	<b>212-377-0</b>
LC50			450 mg/l
Duration of exposure			96 h
Species	Salmo gairdneri		
Method	EU C.1		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

**Toxicity to fish (chronic)**

No data available

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Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	norflurane	811-97-2	212-377-0
EC50		980	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	EU C.2		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Toxicity to Daphnia (chronic)			
No data available			

Toxicity to algae (acute)			
No data available			

Toxicity to algae (chronic)			
No data available			

Bacteria toxicity			
No data available			

## 12.2 Persistence and degradability

Biodegradability			
No	Substance name	CAS no.	EC no.
1	norflurane	811-97-2	212-377-0
Type	aerobic biodegradation		
Value	appr.	3	%
Duration		28	d
Method	OECD 301 D		
Source	ECHA		
Evaluation	not readily biodegradable		
2	pentafluoroethane	354-33-6	206-557-8
Type	aerobic biodegradation		
Value	appr.	5	%
Duration		28	d
Method	Closed Bottle Test (OECD 301D)		
Source	ECHA		
Evaluation	not readily biodegradable		
3	difluoromethane	75-10-5	200-839-4
Type	aerobic biodegradation		
Value		5	%
Duration		28	d
Method	OECD 301 D		
Source	ECHA		
Evaluation	not readily biodegradable		

## 12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	norflurane	811-97-2	212-377-0
log Pow		1,06	
Reference temperature		25	°C
with reference to	pH 6.0		
Method	OECD 107		
Source	ECHA		
2	pentafluoroethane	354-33-6	206-557-8
log Pow		1,48	
Reference temperature		25	°C
with reference to	pH 6.34		

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Method Source		OECD 107 ECHA	
3	difluoromethane	75-10-5	200-839-4
log Pow		0,21	
Reference temperature with reference to		25	°C
Method Source		pH 6,1 OECD 107 ECHA	

**12.4 Mobility in soil**

No data available.

**12.5 Results of PBT and vPvB assessment**

Results of PBT and vPvB assessment	
Product Name	
R 407F	
PBT assessment	The product is not considered to be a PBT.
vPvB assessment	The product is not considered to be a vPvB.

**12.6 Endocrine disrupting properties**

No data available.

**12.7 Other adverse effects**

Other adverse effects
Global warming potential (GWP): 1825

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.  
dispose of in accordance with local regulation.

**Packaging**

Containers must be completely emptied and disposed of in accordance with the legal requirements. Containers that have not been emptied must be taken to the disposal site after consultation with the disposal company.

**SECTION 14: Transport information****14.1 UN number or ID number**

ADR/RID/ADN	UN3163
IMDG	UN3163
ICAO-TI / IATA	UN3163

**14.2 UN proper shipping name**

ADR/RID/ADN	LIQUEFIED GAS, N.O.S.
Technical name	norflurane pentafluoroethane
IMDG	LIQUEFIED GAS, N.O.S.
Technical name	norflurane pentafluoroethane
ICAO-TI / IATA	Liquefied gas, n.o.s.
Technical name	norflurane pentafluoroethane

**14.3 Transport hazard class(es)**

ADR/RID/ADN - Class	2
Label	2.2 RID: (+13)
Classification code	2A

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Tunnel restriction code	C/E
Hazard identification no.	20
<b>IMDG - Class</b>	2.2
Label	2.2
<b>ICAO-TI / IATA - Class</b>	2.2
Label	2.2

**14.4 Packing group**

<b>ADR/RID/ADN</b>	-
<b>IMDG</b>	-
<b>ICAO-TI / IATA</b>	-

**14.5 Environmental hazards**

EmS	F-C, S-V
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**14.6 Special precautions for user**

To be transported always in closed, upright and safe containers. Make sure that persons handling these containers are aware of the rules of conduct in case of incident or spillage.

**14.7 Maritime transport in bulk according to IMO instruments**

Not relevant

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations****Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

**REACH candidate list of substances of very high concern (SVHC) for authorisation**

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

**Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances subject to restriction as listed in Annex XVII of the REACH regulation (EC) 1907/2006.

**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

This product is not subject to Part 1 or 2 of Annex I.

**Other regulations**

REGULATION (EU) No 2024/573 on fluorinated greenhouse gases  
Adhere to the national sanitary and occupational safety regulations when using this product.

**National regulations****Water Hazard Class (Germany)**

Class	1
Source	Classification according to AwSV (Regulation on facilities for handling substances that are hazardous to water).

**Other regulations**

REGULATION (EU) No. 517/2014 on fluorinated greenhouse gases; Take into account: TRGS 510 "Storage of hazardous substances in non-stationary containers"

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has been carried out for one or more of the substances within this mixture.

**Trade name:** R 407F

**Current version :** 1.0.0, issued: 30.07.2025

**Replaced version:** -, issued: -

**Region:**  
GER

### SECTION 16: Other information

**Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

**Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)**

H221                                      Flammable gas.

**Creation of the safety data sheet**

UMCO GmbH

This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

This document is an English translation of the legally compliant safety data sheet of the region Germany. This document, including UFI and emergency telephone number, may only be used for placing on the market in the region Germany.

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