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

1.1. Product identifier

112 Brake spray MP11200400AB

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

Use of the substance/mixture

Lubricant

1.3. Details of the supplier of the safety data sheet

Company name:	TUNAP GmbH & Co. KG	
Street:	Bürgermeister-Seidl-Str. 2	
Place:	D-82515 Wolfratshausen	
Telephone:	+49 (0) 8171/1600 - 0	Telefax: +49 (0) 8171/1600 - 40
e-mail:	sdb@tunap.com	
Internet:	www.tunap.com	

1.4. Emergency telephone number:

+49 (0) 30 30 686 790 (Giftnotruf Berlin)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Aerosol: Aerosol 1
Skin corrosion/irritation: Skin Irrit. 2
Respiratory or skin sensitisation: Skin Sens. 1
Specific target organ toxicity - single exposure: STOT SE 3
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Extremely flammable aerosol.
Pressurised container: May burst if heated.
Causes skin irritation.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Hydrocarbons, C6-C7, n-alkanes, isoalkanes cyclic, < 5% n-hexane
Hydrocarbons, C7, n-alkanes, iso-alkanes, cyclics
Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts
(R)-p-mentha-1,8-diene, d-limonene

Signal word: Danger

Pictograms:

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H315	Causes skin irritation.

H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

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.
P260	Do not breathe Aerosol.
P280	Wear eye protection.
P262	Do not get in eyes, on skin, or on clothing.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P302+P352	IF ON SKIN: Wash with plenty of Water and soap..
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P251	Do not pierce or burn, even after use.

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
75-28-5	isobutane			25 - < 50 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Liquefied gas; H220 H280			
92128-66-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes cyclic, < 5% n-hexane			0 - <7 %
	921-024-6		01-2119475514-35	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411			
74-98-6	propane			5 - < 10 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Liquefied gas; H220 H280			
64742-49-0	Hydrocarbons, C7, n-alkanes, iso-alkanes, cyclics			0 - <7 %
	927-510-4		01-2119475515-33	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411			
106-97-8	butane			1 - < 3 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Liquefied gas; H220 H280			
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene			0.1 - < 1 %
	227-813-5		01-2119529223-47	
	Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H226 H315 H317 H304 H400 H410			
68584-23-6	Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts			0.1 - < 1 %
	271-529-4		01-2119492627-25	
	Eye Irrit. 2; H319			
70024-69-0	Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts			0.1 - < 1 %
	274-263-7		01-2119492616-2	
	Skin Sens. 1B; H317			
1471316-72-9	Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts			0.1 - < 1 %
	939-603-7		01-2119978241-36	
	Skin Sens. 1B; H317			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO2). Extinguishing powder.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information

Danger of bursting container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Observe instructions for use.
Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
When using do not eat, drink, smoke, sniff.
Wear personal protection equipment (refer to section 8).
In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Observe legal regulations and provisions.

Hints on joint storage

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Protect from frost. Protect against direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL
14807-96-6	Talc respirable dust	-	1		TWA (8 h)	WEL
13463-67-7	Titanium dioxide, respirable	-	4		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
92128-66-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes cyclic, < 5% n-hexane			
Worker DNEL, long-term		inhalation	systemic	2035 mg/m³
Worker DNEL, long-term		dermal	systemic	773 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	608 mg/m³
Consumer DNEL, long-term		dermal	systemic	699 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	699 mg/kg bw/day
64742-49-0	Hydrocarbons, C7, n-alkanes, iso-alkanes, cyclics			
Worker DNEL, long-term		inhalation	systemic	2085 mg/m³
Worker DNEL, long-term		dermal	systemic	300 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	447 mg/m³
Consumer DNEL, long-term		dermal	systemic	149 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	149 mg/kg bw/day
70024-69-0	Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts			
Worker DNEL, long-term		inhalation	systemic	11,75 mg/m³
Worker DNEL, long-term		dermal	systemic	3,33 mg/kg bw/day
Worker DNEL, long-term		dermal	local	1,03 mg/cm²
Consumer DNEL, long-term		inhalation	systemic	2,9 mg/m³
Consumer DNEL, long-term		dermal	systemic	1,667 mg/kg bw/day
Consumer DNEL, long-term		dermal	local	0,513 mg/cm²
Consumer DNEL, long-term		oral	systemic	0,833 mg/kg bw/day
1471316-72-9	Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts			
Worker DNEL, long-term		inhalation	systemic	35,26 mg/m³
Worker DNEL, long-term		dermal	systemic	25 mg/kg bw/day
Worker DNEL, acute		dermal	local	1,04 mg/cm²
Consumer DNEL, long-term		inhalation	systemic	8,7 mg/m³
Consumer DNEL, long-term		dermal	systemic	12,5 mg/kg bw/day
Consumer DNEL, acute		dermal	local	0,518 mg/cm²
Consumer DNEL, long-term		oral	systemic	2,5 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
70024-69-0	Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	
Freshwater		1 mg/l
Freshwater (intermittent releases)		10 mg/l
Marine water		1 mg/l
Freshwater sediment		226000000 mg/kg
Marine sediment		226000000 mg/kg
Secondary poisoning		16,667 mg/kg
Micro-organisms in sewage treatment plants (STP)		1000 mg/l
Soil		271000000 mg/kg
1471316-72-9	Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts	
Freshwater		0,1 mg/l
Freshwater (intermittent releases)		1 mg/l
Marine water		0,1 mg/l
Freshwater sediment		45211 mg/kg
Marine sediment		45211 mg/kg
Micro-organisms in sewage treatment plants (STP)		1000 mg/l
Soil		36739,74 mg/kg

Additional advice on limit values

a no restriction
b End of exposure or end of shift
c at long term exposure: after several previous shifts
d before next shift

blood (B)
Urine (U)

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Protective and hygiene measures

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.
DIN EN 166

Hand protection

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Suitable material: NBR (Nitrile rubber) Breakthrough time (maximum wearing time) 480min
Thickness of the glove material 0,45 mm
DIN EN 374

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
When exceeding the relevant workplace exposure limits, note the following:
Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..
Filtering device with filter or ventilator filtering device of type: AX
Observe the wear time limits as specified by the manufacturer.
Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol	
Colour:	grey	
Odour:	characteristic	
		Test method
pH-Value (at 20 °C):	not determined	DIN 19268
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	-40 °C	
Flash point:	-80 °C	
Flammability		
Solid:	not applicable	
Gas:	not applicable	
Lower explosion limits:	1,1 vol. %	
Upper explosion limits:	9,4 vol. %	
Auto-ignition temperature		
Solid:	not applicable	
Gas:	not applicable	
Decomposition temperature:	not determined	
Oxidizing properties		
Not oxidising.		
Vapour pressure:	not determined	
Density (at 20 °C):	1,0856 g/cm³	DIN 51757
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.	
Solubility in other solvents		
not determined		
Partition coefficient:	not determined	
Vapour density:	not determined	
Evaporation rate:	not determined	

9.2. Other information

Solid content:	not determined

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name			
	Exposure route	Dose	Species	Source
75-28-5	isobutane			
	inhalation vapour	LC50 1237 mg/l	Mouse.	
92128-66-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes cyclic, < 5% n-hexane			
	oral	LD50 > 5000 mg/kg	Rat	
	dermal	LD50 > 2800 - 3100 mg/kg	Rat	Study report (1977)
	inhalation (4 h) vapour	LC50 > 25,2 mg/l	Rat	Study report (1988)
64742-49-0	Hydrocarbons, C7, n-alkanes, iso-alkanes, cyclics			
	oral	LD50 5500 mg/kg	Rat	
	dermal	LD50 > 2800 - 3100 mg/kg	Rat	Study report (1977)
	inhalation (4 h) vapour	LC50 > 23,3 mg/l	Rat	Study report (1988)
106-97-8	butane			
	inhalation (4 h) gas	LC50 658 ppm	Rat	GESTIS
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene			
	oral	LD50 > 2000 mg/kg	Rat	Study report (2010)
	dermal	LD50 > 2000 mg/kg	Kaninchen	IUCLID
68584-23-6	Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts			
	oral	LD50 >5000 mg/kg	Rat	
	dermal	LD50 >5000 mg/kg	Rat	
	inhalation (4 h) aerosol	LC50 >5 mg/l	Rat	
70024-69-0	Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts			
	oral	LD50 > 16000 mg/kg	Rat	Study report (1981)
	dermal	LD50 > 4000 mg/kg	Rabbit	Study report (1986)
	inhalation (4 h) aerosol	LC50 >5 mg/l	Rat	
1471316-72-9	Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts			
	oral	LD50 > 10000 - < 20000 mg/kg	Rat	Study report (1972)
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1989)

Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. ((R)-p-mentha-1,8-diene, d-limonene; Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts; Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

No indication of human carcinogenicity.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No information available.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Dose		[h] | [d]	Species	Source
75-28-5	isobutane					
	Acute fish toxicity	LC50	91,42 mg/l	96 h	Fish, no other information	United States Environmental Protection A
	Acute algae toxicity	ErC50	19,37 mg/l	96 h	Algae	USEPA OPPT Risk Assessment Division (200
	Acute crustacea toxicity	EC50	69,43 mg/l	48 h	Daphnia sp.	USEPA OPPT Risk Assessment Division (200
92128-66-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes cyclic, < 5% n-hexane					
	Acute fish toxicity	LC50	> 1-10 mg/l	96 h	Pimephales promelas	
	Acute algae toxicity	ErC50	10 - 30 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1995)
	Acute crustacea toxicity	EC50	> 1-10 mg/l	48 h	Daphnia magna	
	Fish toxicity	NOEC	2,045 mg/l	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)
	Crustacea toxicity	NOEC	1 mg/l	21 d	Daphnia magna	SIDS Initial Assessment Report For SIAM
74-98-6	propane					
	Acute fish toxicity	LC50	49,9 mg/l	96 h	Fish, no other information	United States Environmental Protection A
	Acute algae toxicity	ErC50	19,37 mg/l	96 h	Algae	USEPA OPPT Risk Assessment Division (200
	Acute crustacea toxicity	EC50	69,43 mg/l	48 h	Daphnia sp.	USEPA OPPT Risk Assessment Division (200
64742-49-0	Hydrocarbons, C7, n-alkanes, iso-alkanes, cyclics					
	Acute fish toxicity	LC50	>1 - 10 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	12 mg/l	72 h	Pseudokirchneriella subcapitata	SIDS Initial Assessment Report For SIAM
	Acute crustacea toxicity	EC50	>1 - 10 mg/l	48 h	Daphnia magna	
	Fish toxicity	NOEC	1,534 mg/l	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)
	Crustacea toxicity	NOEC	1 mg/l	21 d	Daphnia magna	SIDS Initial Assessment Report For SIAM
106-97-8	butane					
	Acute fish toxicity	LC50	49,9 mg/l	96 h	Fish, no other information	United States Environmental Protection A
	Acute algae toxicity	ErC50	19,37 mg/l	96 h	Algae	USEPA OPPT Risk Assessment Division (200

	Acute crustacea toxicity	EC50	69,43 mg/l	48 h	Daphnia sp.	USEPA OPPT Risk Assessment Division (200
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene					
	Acute fish toxicity	LC50	0,72 mg/l	96 h	Pimephales promelas	Study report (1990)
	Acute algae toxicity	ErC50	0,32 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2013)
	Acute crustacea toxicity	EC50	0,307 mg/l	48 h	Daphnia magna	Study report (2013)
	Fish toxicity	NOEC	0,37 mg/l	8 d	Pimephales promelas	Study report (2015)
	Crustacea toxicity	NOEC	0,08 mg/l	21 d	Daphnia magna	Study report (2016)
	Acute bacteria toxicity	(209 mg/l)		3 h	activated sludge of a predominantly domestic sewag	Study report (2010)
68584-23-6	Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts					
	Acute fish toxicity	LC50	>10000 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	>1000 mg/l	96 h	Scenedesmus subspicatus	
	Acute crustacea toxicity	EC50	>1000 mg/l	48 h	Daphnia magna	
70024-69-0	Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts					
	Acute fish toxicity	LC50	>10000 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	> 1000 mg/l	72 h	Pseudokirchneriella subcapitata	REACh Registration Dossier
	Acute crustacea toxicity	EC50	> 1000 mg/l	48 h	Daphnia magna	REACh Registration Dossier
	Acute bacteria toxicity	(> 10000 mg/l)		3 h	activated sludge of a predominantly domestic sewag	REACh Registration Dossier
1471316-72-9	Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts					
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	> 1000 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1994)
	Acute crustacea toxicity	EC50	> 1000 mg/l	48 h	Daphnia magna	Study report (1993)
	Acute bacteria toxicity	(> 10000 mg/l)		3 h	activated sludge of a predominantly domestic sewag	Study report (1994)

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
92128-66-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes cyclic, < 5% n-hexane			
	OECD Guideline 301 F	98%	28	
	Easily biodegradable (concerning to the criteria of the OECD)			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
75-28-5	isobutane	1,09
92128-66-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes cyclic, < 5% n-hexane	3,4 - 5,2
74-98-6	propane	1,09
106-97-8	butane	1,09
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	4,38
70024-69-0	Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	18,05
1471316-72-9	Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts	> 6,91

BCF

CAS No	Chemical name	BCF	Species	Source
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	908,5		Other company data (
1471316-72-9	Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts	70,8	Fish, not further specified.	Study report (2013)

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Waste disposal number of used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1950

14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1
Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1
Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1
Marine pollutant:	no
Special Provisions:	63, 190, 277, 327, 344, 381,959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS, flammable
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1
Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	no

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 28: isobutane; Hydrocarbons, C6-C7, n-alkanes, isoalkanes cyclic, < 5% n-hexane; Hydrocarbons, C7, n-alkanes, iso-alkanes, cyclics; butane

2010/75/EU (VOC):	No information available.
2004/42/EC (VOC):	No information available.

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Aerosol directive (75/324/EEC)

National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
Water contaminating class (D):	2 - clearly water contaminating

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 3.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)