SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

Carsystem Thermo Spray silber

Version		Revision Date:	Date of last issue: 09.10.2023
2.2	DE / EN	24.06.2024	Date of first issue: 08.08.2022

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

1.1 Product identifier

Trade name : Carsystem Thermo Spray silber

Product code : 126.087

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

Use of the Sub-stance/Mixture : Paints

Recommended restrictions on use : Industrial use, professional use

1.3 Details of the supplier of the safety data sheet

Company : JASA AG
Müslistrasse 43
8957 Spreitenbach
Schweiz

info@jasa-ag.ch, www.jasa-ag.ch

Telephone : +41 (0)44 431 60 70
Telefax : +41 (0)44 432 63 17

Responsible Department : Productmanagement, Tel: +41 (0)44 431 60 70, sds@jasa-ag.ch

1.4 Emergency telephone

Telephone : Tox Info Suisse (STIZ), Tel: 145

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Danger

Hazard Statements :	H222	Extremely flammable aerosol.
	H229	Pressurised container: May burst if heated.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.
	H411	Toxic to aquatic life with long lasting effects.
Supplemental Hazard Statements :		Buildup of explosive mixtures possible without sufficient ventilation.
Precautionary Statements :	P101	If medical advice is needed, have product container or label at hand.
	P102	Keep out of reach of children.
	Prevention:	
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P211	Do not spray on an open flame or other ignition source.
	P251	Do not pierce or burn, even after use.
	P260	Do not breathe spray.

Storage:

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

Disposal:

P501 Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazardous ingredients which must be listed on the label:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
acetone
Hydrocarbons, C9, Aromatics
butan-1-ol

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture 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.

Toxicological information: The substance/mixture 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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : aerosol
Mixture

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Not Assigned 921-024-6 01-2119475514-35	Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 20 - < 25
acetone	67-64-1 200-662-2 606-001-00-8	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	>= 5 - < 10

	01-2119471330-49	(Central nervous system) EUH066	
Hydrocarbons, C9, Aromatics	Not Assigned 918-668-5 01-2119455851-35	Flam. Liq. 3; H226 STOT SE 3; H335 (Respiratory system) STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411 EUH066	>= 5 - < 10
Reaction mass of ethylbenzene and xylene	Not Assigned 905-588-0 01-2119486136-34, 01-2119488216-32, 01-2119539452-40	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 Asp. Tox. 1; H304 --- specific concentration limit STOT RE 2 >= 10 %	>= 5 - < 10
butan-1-ol	71-36-3 200-751-6 603-004-00-6 01-2119484630-38	Flam. Liq. 3; H226 Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory system) --- Acute toxicity esti-mate Acute oral toxicity: 500 mg/kg	>= 1 - < 2,5
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not Assigned 919-857-5 01-2119463258-33	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 EUH066	>= 1 - < 2,5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice	:	First aider needs to protect himself. Remove from exposure, lie down. If unconscious, place in recovery position and seek medical advice. Take off contaminated clothing and shoes immediately. Symptoms of poisoning may appear several hours later.
If inhaled	:	Move to fresh air. If symptoms persist, call a physician.
In case of skin contact	:	Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.
In case of eye contact	:	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
If swallowed	:	Swallowing is not regarded as a possible method for exposure. Immediately give large quantities of water to drink. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Risks	:	Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Carbon dioxide (CO2) Dry powder Water spray jet Alcohol-resistant foam
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting	:	Vapors may form explosive mixtures with air. Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.
Hazardous combustion products	:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	Use personal protective equipment. Wear suitable respiratory protection equipment.
Further information	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Wear personal protective equipment. Evacuate personnel to safe areas. Remove all sources of ignition. Ensure adequate ventilation. Avoid inhalation of vapor or mist. Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Environmental precautions	:	Should not be released into the environment. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Ventilate the area. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Local/Total ventilation	:	Ensure adequate ventilation.
Advice on safe handling	:	Pressurized container: Protect from sunlight and do not ex-

pose to temperatures exceeding 50°C / 122 °F. Also after use, do not open with force or burn.
Provide sufficient air exchange and/or exhaust in work rooms.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition. Keep away from direct sunlight.

Hygiene measures : Do not inhale aerosol.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Please observe the storage instructions for aerosols! Keep containers tightly closed in a cool, well-ventilated place. Solvent vapors are heavier than air and may spread along floors. Keep away from direct sunlight. Keep away from heat and sources of ignition.

Further information on storage conditions : Storage must be in accordance with the BetrSichV (Germany).

Advice on common storage : Keep away from food and drink.

Storage class (TRGS 510) : 2B

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
propane	74-98-6	AGW	1.000 ppm 1.800 mg/m3	DE TRGS 900
	Peak-limit category: 4;(II)			
		MAK	1.000 ppm 1.800 mg/m3	DE DFG MAK
	Further information: Either there are no data for an assessment of damage to the embryo or foetus, including developmental neurotoxicity, or the currently available data are not sufficient for classification in one of the groups A - C			
butane (containing < 0,1 % butadiene (203-450-8))	106-97-8	AGW	1.000 ppm 2.400 mg/m3	DE TRGS 900
	Peak-limit category: 4;(II)			
aluminium powder (stabilised)	7429-90-5	AGW (Inhalable fraction)	10 mg/m3	DE TRGS 900
	Peak-limit category: 2;(II)			

	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW (Alveolate fraction)	1,25 mg/m3	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
acetone	67-64-1	TWA	500 ppm 1.210 mg/m3	2000/39/EC
	Further information: Indicative			
		AGW	500 ppm 1.200 mg/m3	DE TRGS 900
	Peak-limit category: 2;(I)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		MAK	500 ppm 1.200 mg/m3	DE DFG MAK
	Further information: According to currently available information damage to the embryo or foetus cannot be excluded after exposure to concentrations at the level of the MAK and BAT values			
isobutane (< 0,1% 1,3-butadiene (203-450-8))	75-28-5	AGW	1.000 ppm 2.400 mg/m3	DE TRGS 900
	Peak-limit category: 4;(II)			
butan-1-ol	71-36-3	AGW	100 ppm 310 mg/m3	DE TRGS 900
	Peak-limit category: 1;(I)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		MAK	100 ppm 310 mg/m3	DE DFG MAK
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not As-signed	AGW	300 mg/m3	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: Group exposure limit for hydrocarbon solvent mixtures			

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
aluminium powder (stabilised)	7429-90-5	Aluminum: 50 µg/g creatinine (Urine)	In case of long-term exposure: after more than one shift	TRGS 903
		Aluminum: 50 µg/g creatinine (Urine)	end of shift, for long-term exposures after several previous shifts	DE DFG BAT
acetone	67-64-1	Acetone: 50 mg/l (Urine)	Immediately after exposure or after	TRGS 903

			working hours	
		Acetone: 50 mg/l (Urine)	Immediately after exposition or after working hours	DE DFG BAT
butan-1-ol	71-36-3	1-butanol: 2 mg/g creatinine (Urine)	Before next shift	TRGS 903
		1-butanol: 10 mg/g creatinine (Urine)	Immediately after exposure or after working hours	TRGS 903
		1-butanol: 2 mg/g creatinine (Urine)	Before next shift	DE DFG BAT
		1-butanol: 10 mg/g creatinine (Urine)	Immediately after exposition or after working hours	DE DFG BAT

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Workers	Inhalation	Long-term systemic effects	2035 mg/m3
	Workers	Skin contact	Long-term systemic effects	773 mg/kg
	Consumers	Inhalation	Long-term systemic effects	608 mg/m3
	Consumers	Skin contact, Oral	Long-term systemic effects	699 mg/kg
acetone	Workers	Inhalation	Long-term systemic effects	1210 mg/m3
	Workers	Inhalation	Long-term local effects	2420 mg/m3
	Workers	Skin contact	Long-term systemic effects	186 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	200 mg/m3
	Consumers	Skin contact, Oral	Long-term systemic effects	62 mg/kg bw/day
Hydrocarbons, C9, Aromatics	Workers	Inhalation	Long-term systemic effects	151 mg/m3
	Workers	Skin contact	Long-term systemic effects	12,5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	32 mg/m3
	Consumers	Skin contact	Long-term systemic effects	7,5 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	7,5 mg/kg bw/day
Reaction mass of ethylbenzene and	Workers	Inhalation	Long-term systemic effects	77 mg/m3

xylene				
	Workers	Skin contact	Long-term systemic effects	180 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	15 mg/m3
	Consumers	Skin contact	Long-term systemic effects	125 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	1,6 mg/kg bw/day
butan-1-ol	Workers	Inhalation	Long-term systemic effects	310 mg/m3
	Consumers	Inhalation	Long-term systemic effects	55,357 mg/m3
	Consumers	Dermal		3,125 mg/kg bw/day
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Workers	Inhalation	Long-term systemic effects	871 mg/m3
	Consumers	Inhalation	Long-term systemic effects	185 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
acetone	Fresh water	10,6 mg/l
	Sea water	1,06 mg/l
	Sewage treatment plant (STP)	100 mg/l
	Fresh water sediment	30,4 mg/kg dry weight (d.w.)
	Sea sediment	3,04 mg/kg dry weight (d.w.)
	Soil	29,5 mg/kg dry weight (d.w.)
Reaction mass of ethylbenzene and xylene	Fresh water	0,327 mg/l
	Sea water	0,327 mg/l
	Sewage treatment plant (STP)	6,58 mg/l
	Fresh water sediment	12,46 mg/kg dry weight (d.w.)
	Sea sediment	12,46 mg/kg dry weight (d.w.)
	Soil	2,31 mg/kg dry weight (d.w.)
butan-1-ol	Fresh water	0,082 mg/l
	Fresh water sediment	0,324 mg/kg dry weight (d.w.)
	Sea water	0,008 mg/l
	Sea sediment	0,032 mg/kg dry weight (d.w.)
	Sewage treatment plant (STP)	2476 mg/l
	Soil	0,017 mg/kg dry weight (d.w.)

8.2 Exposure controls

Personal protective equipment

Eye/face protection	:	Tightly fitting safety goggles Safety glasses with side-shields conforming to EN166
Hand protection		
Material	:	butyl-rubber
Break through time	:	> 480 min
Glove thickness	:	>= 0,4 mm
Directive	:	DIN EN 374
Protective index	:	Class 6
Remarks	:	The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The exact break through time can be obtained from the protective glove producer and this has to be observed. Preventive skin protection
Skin and body protection	:	Please wear suitable protective clothing, e.g. made of cotton or heat-resistant synthetic fibres. Long sleeved clothing
Respiratory protection	:	No personal respiratory protective equipment normally required. In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Filter type	:	Filter type A-P
Protective measures	:	Use only with adequate ventilation. When using do not eat, drink or smoke. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist.

Environmental exposure controls

Soil	:	Avoid subsoil penetration.
Water	:	Do not flush into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	aerosol
Color	:	silver
Odor	:	characteristic

Melting point/freezing point	:	not determined
Initial boiling point and boiling range	:	Not applicable
Upper explosion limit / Upper flammability limit	:	10,9 %(V)
Lower explosion limit / Lower flammability limit	:	1,5 %(V)
Flash point	:	Not applicable
Autoignition temperature	:	365 °C
pH	:	not determined substance/mixture is non-soluble (in water)
Viscosity		
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	not determined
Solubility(ies)		
Water solubility	:	immiscible
Partition coefficient: n-octanol/water	:	not determined
Vapor pressure	:	8.300 hPa (20 °C)
Density	:	0,7 g/cm3 (20 °C)

9.2 Other information

Explosives	:	Not explosive In use, may form flammable/explosive vapour-air mixture.
Self-ignition	:	not auto-flammable

Substances and mixtures which in contact with water emit flammable gases	:	The substance or mixture does not emit flammable gases in contact with water.

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if used as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Vapors may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid	:	Keep away from heat and sources of ignition. Strong sunlight for prolonged periods.

10.5 Incompatible materials

Materials to avoid	:	No data available

10.6 Hazardous decomposition products

Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

SECTION 11: Toxicological information

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

Acute toxicity

Not classified due to lack of data.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Acute oral toxicity	:	LD50 Oral (Rat): > 5.840 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 25,2 mg/l Exposure time: 4 h Test atmosphere: vapor
Acute dermal toxicity	:	LD50 Dermal (Rat): > 2.800 - 3.100 mg/kg

acetone:

Acute oral toxicity	:	LD50 Oral (Rat): 5.800 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): ca. 76 mg/l Exposure time: 4 h Test atmosphere: vapor
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 7.400 mg/kg

Hydrocarbons, C9, Aromatics:

Acute oral toxicity	:	LD50 Oral (Rat, female): ca. 3.492 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): > 6,193 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 3.160 mg/kg Method: OECD Test Guideline 402

Reaction mass of ethylbenzene and xylene:

Acute oral toxicity	:	LD50 Oral (Rat): 3.523 - 4.000 mg/kg Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)
Acute inhalation toxicity	:	LC50 (Rat, male): 6350 - 6700 ppm Exposure time: 4 h Test atmosphere: vapor Method: Regulation (EC) No. 440/2008, Annex, B.2
Acute dermal toxicity	:	LD50 Dermal (Rabbit): 12.126 mg/kg

butan-1-ol:

Acute oral toxicity	:	Acute toxicity estimate: 500 mg/kg Method: Converted acute toxicity point estimate Remarks: (*) Converted acute toxicity point estimate according to Table 3.1.2 of Annex I.

Acute dermal toxicity : (Rabbit): 3.430 mg/kg
Method: OECD Test Guideline 402

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 9,3 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 Dermal (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Causes skin irritation.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Result : Skin irritation

Hydrocarbons, C9, Aromatics:

Result : Repeated exposure may cause skin dryness or cracking.

Reaction mass of ethylbenzene and xylene:

Result : Skin irritation

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Assessment : Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

Reaction mass of ethylbenzene and xylene:

Result : Moderate eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Hydrocarbons, C9, Aromatics:

Germ cell mutagenicity- Assessment	:	Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Carcinogenicity

Not classified due to lack of data.

Components:

Hydrocarbons, C9, Aromatics:

Carcinogenicity - Assessment	:	Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Carcinogenicity - Assessment	:	Carcinogenicity classification not possible from current data.

Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

May cause drowsiness or dizziness.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Assessment	:	May cause drowsiness or dizziness.

Hydrocarbons, C9, Aromatics:

Assessment	:	May cause respiratory irritation., May cause drowsiness or dizziness.

Reaction mass of ethylbenzene and xylene:

Assessment	:	May cause respiratory irritation.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Assessment	:	May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified due to lack of data.

Components:

Reaction mass of ethylbenzene and xylene:

Assessment : May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified due to lack of data.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

May be fatal if swallowed and enters airways.

Hydrocarbons, C9, Aromatics:

May be fatal if swallowed and enters airways.

Reaction mass of ethylbenzene and xylene:

May be fatal if swallowed and enters airways.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture 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.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 11,4 mg/l
End point: mortality
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3 mg/l
End point: Immobilization
Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): 10 - 30 mg/l
End point: Biomass
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Bacteria): 35,57 mg/l
End point: Growth rate
Exposure time: 48 h

Toxicity to fish (Chronic toxicity) : NOELR: 2.045 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

acetone:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5.540 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): 8.800 mg/l
End point: mortality
Exposure time: 48 h

Toxicity to algae/aquatic plants : NOEC (algae): 430 mg/l
Exposure time: 96 h

Toxicity to microorganisms : EC10 (Bacteria): 1.000 mg/l
Exposure time: 0,5 h
Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 2.212 mg/l
Exposure time: 28 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Hydrocarbons, C9, Aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 9,2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3,2 mg/l
End point: Immobilization

Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOELR (Pseudokirchneriella subcapitata (green algae)): 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 2,144 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Reaction mass of ethylbenzene and xylene:

Toxicity to fish : LC50 (Fish): 2,6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia dubia (Water flea)): 1 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (algae): 1,3 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (algae): 0,44 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC50 (Bacteria): 96 mg/l

Toxicity to fish (Chronic toxicity) : NOEC: > 1,3 mg/l
Exposure time: 56 d
Species: Fish

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,96 mg/l
Exposure time: 7 d
Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 1.000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOELR: 0,131 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOELR: 0,23 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

12.2 Persistence and degradability

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Biodegradability	:	Biodegradation: 98 % Exposure time: 28 d Method: OECD Test Guideline 301F

acetone:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 90,9 % Exposure time: 28 d Method: OECD Test Guideline 301B

Hydrocarbons, C9, Aromatics:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 78 % Exposure time: 28 d Method: OECD Test Guideline 301F

Reaction mass of ethylbenzene and xylene:

Biodegradability	:	Result: Readily biodegradable.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Biodegradability	:	Result: Readily biodegradable.

Biodegradation: 80 %
Exposure time: 28 d

12.3 Bioaccumulative potential

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Partition coefficient: n-octanol/water	:	Remarks: No data available

acetone:

Bioaccumulation	:	Bioconcentration factor (BCF): 3 Remarks: Calculation
Partition coefficient: n-octanol/water	:	log Pow: -0,24 (20 °C)

Reaction mass of ethylbenzene and xylene:

Bioaccumulation	:	Bioconcentration factor (BCF): 25,9
Partition coefficient: n-octanol/water	:	log Pow: 3,2 (20 °C)

butan-1-ol:

Partition coefficient: n-octanol/water	:	log Pow: 1,0 (25 °C)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Partition coefficient: n-octanol/water	:	log Pow: > 4

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture 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.

12.7 Other adverse effects

Product:

Additional ecological information : No data available

Global warming potential

Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) of the United Nations Framework Convention on Climate Change (UNFCCC)

Components:

propane:

20-year global warming potential: 0,072
100-year global warming potential: 0,02
500-year global warming potential: 0,006
Atmospheric lifetime: 0,036 yr
Radiative efficiency: 0 Wm2ppb
Further information: Miscellaneous compounds

butane (containing < 0,1 % butadiene (203-450-8)):

20-year global warming potential: 0,022
100-year global warming potential: 0,006
500-year global warming potential: 0,002
Atmospheric lifetime: 0,019 yr
Radiative efficiency: 0 Wm2ppb
Further information: Miscellaneous compounds

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : According to the European Waste Catalog, Waste Codes are not product specific, but application specific.
Dispose of in conjunction with appropriate waste disposal authorities and in accordance with disposal regulations.

Contaminated packaging : Dispose of in accordance with local regulations.

Waste Code : The following Waste Codes are only suggestions:
08 01 11, waste paint and varnish containing organic solvents or other hazardous substances
150104, metallic packaging
15 01 10, packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	UN 1950
ADR	:	UN 1950
RID	:	UN 1950
IMDG	:	UN 1950
IATA	:	UN 1950

14.2 UN proper shipping name

ADN	:	AEROSOLS
ADR	:	AEROSOLS
RID	:	AEROSOLS
IMDG	:	AEROSOLS
IATA	:	Aerosols, flammable

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADN	:	2	2.1
ADR	:	2	2.1
RID	:	2	2.1
IMDG	:	2.1	
IATA	:	2.1	

14.4 Packing group

ADN

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Labels	:	2.1

ADR

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Labels	:	2.1
Tunnel restriction code	:	(D)

RID

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Hazard Identification Number	:	23
Labels	:	2.1

IMDG

Packing group	:	Not assigned by regulation
Labels	:	2.1

EmS Code	:	F-D, S-U

IATA (Cargo)

Packing instruction (cargo aircraft)	:	203
Packing instruction (LQ)	:	Y203
Packing group	:	Not assigned by regulation
Labels	:	Flammable Gas

IATA (Passenger)

Packing instruction (passenger aircraft)	:	203
Packing instruction (LQ)	:	Y203
Packing group	:	Not assigned by regulation
Labels	:	Flammable Gas

14.5 Environmental hazards

ADN
Environmentally hazardous : no

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : no

IMDG
Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 75 If you intend to use this product as tattoo ink, please contact your vendor.
REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. acetone (ANNEX II)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	P3a	FLAMMABLE AEROSOLS
	E2	ENVIRONMENTAL HAZARDS

Water hazard class (Germany)	:	WGK 2 obviously hazardous to water Classification according to AwSV, Annex 1 (5.2)
Volatile organic compounds	:	Directive 2004/42/EC Volatile organic compounds (VOC) content: < 840 g/l VOC content for the product in a ready to use condition.

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical Safety Assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

SECTION 16: Other information

Full text of H-Statements

H225	:	Highly flammable liquid and vapor.
H226	:	Flammable liquid and vapor.
H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H312	:	Harmful in contact with skin.
H315	:	Causes skin irritation.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.

H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H411	:	Toxic to aquatic life with long lasting effects.
EUH066	:	Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Irrit.	:	Skin irritation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
DE DFG BAT	:	Germany. MAK BAT Annex XIII
DE DFG MAK	:	Germany. MAK BAT Annex IIa
DE TRGS 900	:	Germany. TRGS 900 - Occupational exposure limit values.
TRGS 903	:	c - Biological limit values
2000/39/EC / TWA	:	Limit Value - eight hours
DE DFG MAK / MAK	:	MAK value
DE TRGS 900 / AGW	:	Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European

Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Aerosol 1	H222, H229	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
STOT SE 3	H336	Calculation method
Aquatic Chronic 2	H411	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

DE / EN