

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Carsystem KS-400

Version		Revision Date:	Date of last issue: 09.05.2023
1.2	DE / EN	20.09.2023	Date of first issue: 03.08.2022

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

1.1 Product identifier

Trade name : Carsystem KS-400
Product code : 125.468

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

Use of the Sub-stance/Mixture : Corrosion inhibitor
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

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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.

Specific target organ toxicity - single exposure, Category 3, Central nervous system

H336: May cause drowsiness or dizziness.

Long-term (chronic) aquatic hazard, Category 3

H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH066 Repeated exposure may cause skin dryness or cracking.

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.
P271 Use only outdoors or in a well-ventilated area.

Storage:

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

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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, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, < 2% aromatics
pentane

Additional Labeling

EUH208 Contains Sulfonic acids, petroleum, calcium salts. May produce an allergic reaction.

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, 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	>= 20 - < 25
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not Assigned 918-481-9 01-2119457273-39	Asp. Tox. 1; H304 EUH066	>= 5 - < 10
Hydrocarbons, C9-C10, n-	Not Assigned	Flam. Liq. 3; H226	>= 5 - < 10

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alkanes, isoalkanes, cyclics, < 2% aromatics	927-241-2 01-2119471843-32	STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 3; H412 EUH066	
pentane	109-66-0 203-692-4 601-006-00-1 01-2119459286-30	Flam. Liq. 2; H225 STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411 EUH066	>= 5 - < 10
Sulfonic acids, petroleum, calcium salts	61789-86-4 263-093-9 01-2119488992-18	Skin Sens. 1B; H317 <hr/> specific concentration limit Skin Sens. 1B 10 %	>= 2,5 - < 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.
- 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.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

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Risks : May cause drowsiness or dizziness.
Repeated exposure may cause skin dryness or cracking.

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.

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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 expose 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.

Do not smoke.

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

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not Assigned	AGW	300 mg/m ³	DE TRGS 900
Peak-limit category: 2;(II)				
Further information: Group exposure limit for hydrocarbon solvent mixtures				
propane	74-98-6	AGW	1.000 ppm 1.800 mg/m ³	DE TRGS 900
Peak-limit category: 4;(II)				
isobutane (< 0,1% 1,3-butadiene (203-450-8))	75-28-5	AGW	1.000 ppm 2.400 mg/m ³	DE TRGS 900
Peak-limit category: 4;(II)				
butane (containing < 0,1 % butadiene (203-450-8))	106-97-8	AGW	1.000 ppm 2.400 mg/m ³	DE TRGS 900
Peak-limit category: 4;(II)				
pentane	109-66-0	TWA	1.000 ppm 3.000 mg/m ³	2006/15/EC
Further information: Indicative				
		AGW	1.000 ppm 3.000 mg/m ³	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				
Sulfonic acids, petroleum, calcium salts	61789-86-4	AGW (Alveolate fraction)	5 mg/m ³	DE TRGS 900
Peak-limit category: 4;(II)				

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

Substance name	End Use	Routes of exposure	Potential health effects	Value
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Workers	Inhalation	Long-term systemic effects	871 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	185 mg/m ³
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Workers	Inhalation	Long-term systemic effects	871 mg/m ³
	Workers	Skin contact	Long-term systemic	77 mg/kg

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			effects	
	Consumers	Inhalation	Long-term systemic effects	185 mg/m ³
	Consumers	Skin contact, Oral	Long-term systemic effects	46 mg/kg
Sulfonic acids, petroleum, calcium salts	Workers	Inhalation	Long-term systemic effects	11,75 mg/m ³
	Workers	Skin contact	Long-term systemic effects	3,33 mg/kg
	Workers	Skin contact	Long-term local effects	1,03 mg/kg
	Consumers	Inhalation	Long-term systemic effects	2,9 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	1,667 mg/kg
	Consumers	Skin contact	Long-term local effects	0,513 mg/kg
	Consumers	Oral	Long-term systemic effects	0,833 mg/kg

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

Substance name	Environmental Compartment	Value
Sulfonic acids, petroleum, calcium salts	Fresh water	1 mg/l
	Sea water	1 mg/l
	Sewage treatment plant (STP)	1000 mg/l
	Fresh water sediment	226000000 mg/kg
	Sea sediment	226000000 mg/kg
	Soil	271000000 mg/kg

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

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- 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 : off-white
- Odor : solvent
- 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 : 0,6 %(V)
- Flash point : Not applicable
- Autoignition temperature : > 200 °C
- pH : not determined substance/mixture is non-soluble (in water)
- Viscosity
- Viscosity, dynamic : not determined
- Viscosity, kinematic : not determined

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Solubility(ies)
Water solubility : immiscible

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

Vapor pressure : 3.500 hPa (20 °C)

Density : 0,7 g/cm³ (20 °C)

9.2 Other information

Explosives : Not explosive
In use, may form flammable/explosive vapor-air mixture.

Self-ignition : not auto-flammable

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 based on available information.

Components:

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

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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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5,6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Test substance: Aerosol

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Acute oral toxicity : LD50 Oral (Rat): > 15.000 mg/kg
Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat): > 4,951 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): > 5.000 mg/kg
Method: OECD Test Guideline 402

pentane:

Acute oral toxicity : LD50 Oral (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 25,3 mg/l
Exposure time: 4 h
Test atmosphere: vapor

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Method: OECD Test Guideline 403

Sulfonic acids, petroleum, calcium salts:

Acute oral toxicity : LD50 Oral (Rat): > 16.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 1,9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity, The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

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

Skin corrosion/irritation

Repeated exposure may cause skin dryness or cracking.

Components:

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

Assessment : Repeated exposure may cause skin dryness or cracking.

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Assessment : Repeated exposure may cause skin dryness or cracking.

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Result : Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

Sulfonic acids, petroleum, calcium salts:

Assessment : The product is a skin sensitizer, sub-category 1B.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

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Components:

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

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

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

May cause drowsiness or dizziness.

Components:

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

Assessment : May cause drowsiness or dizziness.

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

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

May be fatal if swallowed and enters airways.

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

May be fatal if swallowed and enters airways.

Hydrocarbons, C9-C10, 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.

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SECTION 12: Ecological information

12.1 Toxicity

Components:

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 : EL50 (Daphnia magna (Water flea)): > 1.000 mg/l
aquatic invertebrates : Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1.000
plants : mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to fish (Chronic tox- : NOELR: 0,131 mg/l
icity) : Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other : NOELR: 0,23 mg/l
aquatic invertebrates (Chron- : Exposure time: 21 d
ic toxicity) : 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, C10-C13, 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 : EL50 (Daphnia magna (Water flea)): > 1.000 mg/l
aquatic invertebrates : Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1.000
plants : mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to fish (Chronic tox- : NOELR: 101 mg/l
icity) : Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 176 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 10 - < 30 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 22 - < 46 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: 0,182 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 0,317 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

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

pentane:

Toxicity to fish : LL50 (Fish): 27,55 mg/l
End point: mortality
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 48,11 mg/l
End point: Immobilization
Exposure time: 48 h

EC50 (Daphnia magna (Water flea)): 2,7 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EL50 (algae): 20,33 mg/l
End point: Growth rate
Exposure time: 72 h

EC50 (algae): 10,7 mg/l
End point: Growth rate
Exposure time: 72 h

NOEC (algae): 2,04 mg/l
End point: Growth rate

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Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOELR: 6,165 mg/l
Exposure time: 28 d
Species: Fish

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 10,76 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Sulfonic acids, petroleum, calcium salts:

Toxicity to fish : LL50 (Cyprinodon variegatus (sheepshead minnow)): > 10.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1.000 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC50 (Bacteria): > 10.000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment

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

12.2 Persistence and degradability

Components:

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

Biodegradability : Result: Readily biodegradable.
Biodegradation: 80 %
Exposure time: 28 d

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Biodegradability : Biodegradation: 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Sulfonic acids, petroleum, calcium salts:

Biodegradability : Biodegradation: 8 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

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12.3 Bioaccumulative potential

Components:

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

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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Bioaccumulation : Bioconcentration factor (BCF): 2.500

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

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

pentane:

Partition coefficient: n-octanol/water : log Pow: 3,45 (25 °C)
pH: 7

Sulfonic acids, petroleum, calcium salts:

Partition coefficient: n-octanol/water : log Pow: 22,12 (25 °C)

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

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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
-

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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

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Packing group : Not assigned by regulation
Labels : Flammable Gas

14.5 Environmental hazards

ADN

Environmentally hazardous : no

ADR

Environmentally hazardous : no

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

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

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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.
H304 : May be fatal if swallowed and enters airways.
H317 : May cause an allergic skin reaction.
H336 : May cause drowsiness or dizziness.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.
EUH066 : Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Aquatic Chronic : Long-term (chronic) aquatic hazard
Asp. Tox. : Aspiration hazard
Flam. Liq. : Flammable liquids
Skin Sens. : Skin sensitization
STOT SE : Specific target organ toxicity - single exposure
2006/15/EC : Europe. Indicative occupational exposure limit values
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.
2006/15/EC / TWA : Limit Value - eight hours
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

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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; TECl - 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:

Aerosol 1

H222, H229

STOT SE 3

H336

Aquatic Chronic 3

H412

Classification procedure:

Calculation method

Calculation method

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.

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