



Safety Data Sheet according to (EC) No 1907/2006 as amended

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V004.0

LOCTITE FREKOTE 1STEP known as FREKOTE 1-STEP 5L

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

1.1. Product identifier

LOCTITE FREKOTE 1STEP known as FREKOTE 1-STEP 5L

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

Intended use:

Release agent

1.3. Details of the supplier of the safety data sheet

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For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.com.

1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Flammable liquids	Category 2
H225 Highly flammable liquid and vapour.	
Skin irritation	Category 2
H315 Causes skin irritation.	
Specific target organ toxicity - single exposure	Category 3
H336 May cause drowsiness or dizziness.	
Target organ: Central nervous system	
Aspiration hazard	Category 1
H304 May be fatal if swallowed and enters airways.	
Chronic hazards to the aquatic environment	Category 2
H411 Toxic to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Contains**

Hydrocarbons, C7-C9, isoalkanes

Hydrocarbons, C10-C12, isoalkanes, <2% aromatics

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

Signal word:

Danger

Hazard statement:

H225 Highly flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.

Supplemental information

Contains: PDMS Polymer May produce an allergic reaction.

**Precautionary statement:
Prevention**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
 No smoking.
 P261 Avoid breathing vapors.
 P273 Avoid release to the environment.

**Precautionary statement:
Response**

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor.
 P331 Do NOT induce vomiting.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.

**Precautionary statement:
Storage**

P403+P235 Store in a well-ventilated place. Keep cool.

2.3. Other hazards

None if used properly.
 Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Following substances are present in a concentration $\geq 0,1\%$ and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in concentration \geq the concentration limit that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5 01-2119471305-42	50- 100 %	Flam. Liq. 2, H225 Aquatic Chronic 2, H411 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, Inhalation, H336		
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9 923-037-2 01-2119471991-29	10- 20 %	Aquatic Chronic 2, H411 Flam. Liq. 3, H226 Asp. Tox. 1, H304		
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9 927-241-2 01-2119471843-32	1- < 5 %	Asp. Tox. 1, H304 Flam. Liq. 3, H226 STOT SE 3, H336 Aquatic Chronic 3, H412		
2,2,4-trimethylpentane 540-84-1 208-759-1 01-2119457965-22	0,1- < 1 %	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Acute 1, H400 Skin Irrit. 2, H315 Aquatic Chronic 1, H410	M acute = 1 M chronic = 1	
PDMS Polymer 1432471-92-5	0,1- < 1 %	Flam. Liq. 1, H224 Pyr. Liq. 1, H250 Water-react. 1, H260 Acute Tox. 4, Inhalation, H332 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317		

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

After ingestion or vomit: danger of product entering the lung.

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

SKIN: Redness, inflammation.

ASPIRATION: Coughing, shortness of breath, nausea. Delayed effect: bronchopneumonia or pulmonary oedema

Vapors may cause drowsiness and dizziness.

Prolonged or repeated contact may cause eye irritation.

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

Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

Do not induce vomiting.

Seek medical attention from a specialist.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media:

water, carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

Keep away from sources of ignition.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Dispose of contaminated material as waste according to Section 13.

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

6.4. Reference to other sections

See advice in section 8

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

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Store in a cool, well-ventilated place.

Do not store or use near heat, spark, open flame or other sources of ignition.

Take precautionary measures against static discharges during storage and transport.

Refer to Technical Data Sheet

Do not store together with substances which intensify fire.

Do not store together with oxidants.

7.3. Specific end use(s)

Release agent

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9		600	Exposure limit(s):	2	TRGS 900
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
2,2,4-Trimethylpentane 540-84-1		1.500	Exposure limit(s):	2	TRGS 900
2,2,4-Trimethylpentane 540-84-1			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
2,2,4-Trimethylpentane 540-84-1		600	Exposure limit(s):	2	TRGS 900
2,2,4-Trimethylpentane 540-84-1			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	Workers	inhalation	Long term exposure - systemic effects		2035 mg/m3	
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	Workers	dermal	Long term exposure - systemic effects		773 mg/kg	
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	General population	inhalation	Long term exposure - systemic effects		608 mg/m3	
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	General population	dermal	Long term exposure - systemic effects		699 mg/kg	
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	General population	oral	Long term exposure - systemic effects		699 mg/kg	
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	Workers	inhalation	Long term exposure - systemic effects		871 mg/m3	
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	Workers	dermal	Long term exposure - systemic effects		77 mg/kg	
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	General population	inhalation	Long term exposure - systemic effects		185 mg/m3	
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	General population	dermal	Long term exposure - systemic effects		46 mg/kg	
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	General population	oral	Long term exposure - systemic effects		46 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; ≥ 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; ≥ 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Delivery form	liquid
Colour	Colorless
Odor	Solvent, mild
Melting point	Not available.
Initial boiling point (1.013 hPa)	> 112 °C (> 233.6 °F)
Flammability	flammable
Explosive limits	
lower	0,6 %(V); no information
upper	7 %(V); no information
	Upper/lower explosion limit The product is not explosive. The formation of explosive vapor/air mixtures is possible.
Flash point	6 °C (42.8 °F); Tagliabue closed cup
Auto-ignition temperature	Currently under determination
Decomposition temperature	Currently under determination
pH	Not available.
Viscosity (kinematic) (40 °C (104 °F);)	0,72 mm ² /s
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Slight
Solubility (qualitative) (20 °C (68 °F); Solvent: other organic solvents)	Soluble
Partition coefficient: n-octanol/water	Currently under determination
Vapour pressure	12 mbar
Density (20,0 °C (68 °F))	0,7250 g/cm ³ density, weight
Relative vapour density: (20 °C)	> 1 (Air = 1)
Particle characteristics	Not applicable Product is a liquid

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

None if used properly.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

None if used properly.

SECTION 11: Toxicological information

1.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	LD50	> 7.100 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
2,2,4-trimethylpentane 540-84-1	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	LD50	> 2.200 mg/kg	rabbit	not specified
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	LD50	> 2.200 mg/kg	rabbit	not specified
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	LD50	> 5.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
2,2,4-trimethylpentane 540-84-1	LD50	> 2.000 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	LC50	> 9,4 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	LC50	> 5,6 mg/l	dust/mist	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	LC50	> 4,951 mg/l	vapour	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
2,2,4-trimethylpentane 540-84-1	LC50	> 33,52 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	slightly irritating		rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	slightly irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	not irritating		rabbit	EPA OPPTS 870.2400 (Acute Eye Irritation)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	negative	in vitro mammalian chromosome aberration test	without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	negative	sister chromatid exchange assay in mammalian cells	with and without		equivalent or similar to OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	negative	in vitro mammalian chromosome aberration test	with and without		equivalent or similar to OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	not carcinogenic	inhalation: vapour	6 hours plus T90 (12 minutes) 5 days per week for 105 weeks	rat	male/female	equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5		inhalation: vapour	12 weeks 6 hours/day, 5 days/week	rat	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	NOAEL > 1.000 mg/kg	oral: gavage	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	NOAEL > 10400 mg/m ³	inhalation: vapour	13 w 6 h/d, 5 d/w	rat	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	NOAEL >= 1.000 mg/kg	oral: gavage	7 days/week	rat	equivalent or similar to OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reprod./Develop. Tox. Screening Test)

Aspiration hazard:

The mixture is classified based on Viscosity data.

Hazardous substances CAS-No.	Viscosity (kinematic) Value	Temperature	Method	Remarks
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	0,72 mm ² /s	40 °C	not specified	
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	0,9 mm ² /s	40 °C	calculated	

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	LC50	18.4 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	LL50	Toxicity > Water solubility	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydrocarbons, C9-C10, n- alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	LL50	> 10 - < 30 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,2,4-trimethylpentane 540-84-1	LC50	0,11 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	EL50	2.4 mg/l	48 h	Daphnia magna	other guideline:
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	EL50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydrocarbons, C9-C10, n- alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	EL50	> 22 - < 46 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2,2,4-trimethylpentane 540-84-1	EC50	0,4 mg/l	48 h	Daphnia magna	other guideline:

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	NOEC	0.17 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	NOELR	< 1 mg/l	21 day	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
2,2,4-trimethylpentane 540-84-1	NOEC	0,17 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	EL50	10 - 30 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	NOELR	10 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	EL50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C9-C10, n- alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	EL50	> 1.000 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C9-C10, n- alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	NOELR	< 1 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2,2,4-trimethylpentane 540-84-1	EC0	10.000 mg/l		not specified	not specified

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	inherently biodegradable	aerobic	22,4 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	not readily biodegradable.	aerobic	31,3 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Hydrocarbons, C9-C10, n- alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	readily biodegradable	aerobic	89 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
2,2,4-trimethylpentane 540-84-1	not readily biodegradable.	aerobic	> 0 - 60 %		OECD 301 A - F

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
2,2,4-trimethylpentane 540-84-1	4,5		not specified

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics 65072-03-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 64742-48-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2,2,4-trimethylpentane 540-84-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Do not empty into drains / surface water / ground water.

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

14.1. UN number

ADR	1866
RID	1866
ADN	1866
IMDG	1866
IATA	1866

14.2. UN proper shipping name

ADR	RESIN SOLUTION
RID	RESIN SOLUTION
ADN	RESIN SOLUTION
IMDG	RESIN SOLUTION (Isoalkane C7 - C10)
IATA	Resin solution

14.3. Transport hazard class(es)

ADR	3
RID	3
ADN	3
IMDG	3
IATA	3

14.4. Packing group

ADR	II
RID	II
ADN	II
IMDG	II
IATA	II

14.5. Environmental hazards

ADR	Environmentally Hazardous
RID	Environmentally Hazardous
ADN	Environmentally Hazardous
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	Special provision 640D Tunnelcode: (D/E)
RID	Special provision 640D
ADN	Special provision 640D
IMDG	not applicable
IATA	not applicable

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EC)	< 3 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK: WGK 2: significantly water endangering (Ordinance on facilities for handling substances that are hazardous to water (AwSV))
Classification according to AwSV, Annex 1 (5.2)

BG regulations, rules, infos:

BG data sheet: BGI 621 Solvents
BG data sheet: BGI 595 Irritating substances / Corrosive substances (M004)

Storage class according to TRGS 510: 3

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H224 Extremely flammable liquid and vapour.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H250 Catches fire spontaneously if exposed to air.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory 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.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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