



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

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Pattex Spray Permanent

SDS No. : 43180  
V012.0

Revision: 13.03.2026

printing date: 14.03.2026

Replaces version from: 04.03.2025

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

#### 1.1. Product identifier

Pattex Spray Permanent  
UFI: MJS3-POH5-E001-8QRE

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

Intended use:  
Spray adhesive

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

Henkel AG & Co. KGaA  
Henkelstr. 67  
40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website [www.mysds.henkel.com](http://www.mysds.henkel.com) or [www.henkel-adhesives.com](http://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.

Further information is available at Poison Control Centers.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (CLP):

Flammable aerosols	Category 1
H222 Extremely flammable aerosol.	
H229 Pressurized container: May burst if heated.	
Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Specific target organ toxicity - single exposure	Category 3
H336 May cause drowsiness or dizziness. Target organ: Central nervous system	
Chronic hazards to the aquatic environment	Category 3
H412 Harmful to aquatic life with long lasting effects.	

#### 2.2. Label elements

##### Label elements (CLP):

**Hazard pictogram:****Contains**

Methyl acetate

**Signal word:**

Danger

**Hazard statement:**

H222 Extremely flammable aerosol.  
 H229 Pressurized container: May burst if heated.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H336 May cause drowsiness or dizziness.  
 H412 Harmful to aquatic life with long lasting effects.

**Precautionary statement:**

P101 If medical advice is needed, have product container or label at hand.  
 P102 Keep out of reach of children.

**Precautionary statement:  
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.  
 P261 Avoid breathing mist/vapours.  
 P271 Use only outdoors or in a well-ventilated area.

**Precautionary statement:  
Storage**

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

**Precautionary statement:  
Disposal**

P501 Dispose of contents/container in accordance with national regulation.

**2.3. Other hazards**

Solvents contained in the product evaporate during processing and their vapors can form explosive/highly inflammable air/vapor mixtures.  
 Pregnant women should absolutely avoid inhalation and skin contact.

**Following substances are present in a concentration  $\geq$  the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**

This mixture does not contain any substances in a concentration  $\geq$  the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

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

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

Hazardous components CAS No. EC No REACH-Reg. No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Methyl acetate 79-20-9 201-185-2 01-2119459211-47	20- < 40 %	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336		
Isobutane 75-28-5 200-857-2 01-2119485395-27	20- < 40 %	Flam. Gas 1A, H220 Press. Gas Liquef. Gas, H280		
Propane 74-98-6 200-827-9 01-2119486944-21	10- < 20 %	Flam. Gas 1A, H220 Press. Gas H280		
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n- hexane ----- 01-2119475514-35	10- < 20 %	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411		
Ethyl acetate 141-78-6 205-500-4 01-2119475103-46	1- < 5 %	Flam. Liq. 2, H225 STOT SE 3, H336 Eye Irrit. 2, H319		EU OEL
n-Hexane 110-54-3 203-777-6 01-2119480412-44	0,1- < 1 %	Aquatic Chronic 2, H411 Flam. Liq. 2, H225 Repr. 2, H361f Asp. Tox. 1, H304 STOT RE 1, H372 Skin Irrit. 2, H315 STOT SE 3, H336		SVHC EU OEL
Butyl hydroxytoluene 128-37-0 204-881-4 01-2119555270-46 01-2119565113-46	0,1- < 0,25 %	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M acute = 1 M chronic = 1	

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.

For full text of the H - statements and other abbreviations see section 16 "Other information".

The hazard classification of this product is based solely on the mixture present within the aerosol, excluding the propellant gases. The information provided in Section 3 is based on the combination of the mixture and propellant gases.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Skin care. Remove contaminated clothes immediately.

**Eye contact:**

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

**Ingestion:**

Rinse mouth, do not induce vomiting, consult a doctor.

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

SKIN: Redness, inflammation.

Causes serious eye irritation.

Vapors may cause drowsiness and dizziness.

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

See section: Description of first aid measures

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

carbon dioxide, foam, powder, water spray jet, fine water spray

**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) and carbon dioxide (CO<sub>2</sub>) can be released.

**5.3. Advice for firefighters**

Wear protective equipment.

Wear self-contained breathing apparatus.

**Additional information:**

Cool endangered containers with water spray jet.

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

Wear protective equipment.

Danger of slipping on spilled product.

Avoid contact with skin and eyes.

Ensure adequate ventilation.

**6.2. Environmental precautions**

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

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

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

**6.4. Reference to other sections**

See advice in section 8

**SECTION 7: Handling and storage**

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**7.1. Precautions for safe handling**

Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains.

During processing and drying after adhesion, ventilate well. Avoid all sources of fire such as stoves and ovens. Switch off all electrical devices such as parabolic heaters, hot plates, storage heaters etc. in good time for them to have cooled down before commencing work. Avoid all sparks, including those occurring at electrical switches and devices.

Transport by automobile: leave the container wrapped in a cloth in the trunk, never in the passenger area.

Avoid skin and eye contact.

Hygiene measures:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

**7.2. Conditions for safe storage, including any incompatibilities**

Ensure good ventilation/extraction.

For pressurized can: protect from direct sunshine and temperatures above 50°C.

Store in a cool, frost-free place.

Storage at 15 to 25°C is recommended.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

Do not store together with oxidants.

Do not store together with flammable solutions.

**7.3. Specific end use(s)**

Spray adhesive

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Germany

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Methyl acetate 79-20-9	200	620	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Methyl acetate 79-20-9			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Isobutane 75-28-5			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Isobutane 75-28-5	1.000	2.400	Exposure limit(s):	4	TRGS 900
Propane 74-98-6	1.000	1.800	Exposure limit(s):	4	TRGS 900
Propane 74-98-6			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Ethyl acetate 141-78-6 [ETHYL ACETATE]	200	734	Time Weighted Average (TWA):	Indicative	ECLTV
Ethyl acetate 141-78-6 [ETHYL ACETATE]	400	1.468	Short Term Exposure Limit (STEL):	Indicative	ECLTV
Ethyl acetate 141-78-6			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Ethyl acetate 141-78-6	200	730	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
n-Hexane 110-54-3 [N-HEXANE]	20	72	Time Weighted Average (TWA):	Indicative	ECLTV
n-Hexane 110-54-3	50	180	Exposure limit(s):	8 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
n-Hexane 110-54-3			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
2,6-di-tert-Butyl-p-cresol 128-37-0		10	Exposure limit(s):	4 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
2,6-di-tert-Butyl-p-cresol 128-37-0			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900

**Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Methyl acetate 79-20-9	aqua (freshwater)		0,12 mg/l				
Methyl acetate 79-20-9	aqua (marine water)		0,012 mg/l				
Methyl acetate 79-20-9	sewage treatment plant (STP)		600 mg/l				
Methyl acetate 79-20-9	sediment (freshwater)				0,128 mg/kg		
Methyl acetate 79-20-9	sediment (marine water)				0,0128 mg/kg		
Methyl acetate 79-20-9	Air						no hazard identified
Methyl acetate 79-20-9	Soil				0,042 mg/kg		
Methyl acetate 79-20-9	oral				20,4 mg/kg		
Ethyl acetate 141-78-6	aqua (freshwater)		0,24 mg/l				
Ethyl acetate 141-78-6	aqua (marine water)		0,024 mg/l				
Ethyl acetate 141-78-6	aqua (intermittent releases)		1,65 mg/l				
Ethyl acetate 141-78-6	sewage treatment plant (STP)		650 mg/l				
Ethyl acetate 141-78-6	sediment (freshwater)				1,15 mg/kg		
Ethyl acetate 141-78-6	sediment (marine water)				0,115 mg/kg		
Ethyl acetate 141-78-6	Air						no hazard identified
Ethyl acetate 141-78-6	Soil				0,148 mg/kg		
Ethyl acetate 141-78-6	oral				200 mg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	aqua (freshwater)		0,000199 mg/l				
2,6-Di-tert-butyl-p-cresol 128-37-0	aqua (marine water)		0,00002 mg/l				
2,6-Di-tert-butyl-p-cresol 128-37-0	sewage treatment plant (STP)		0,17 mg/l				
2,6-Di-tert-butyl-p-cresol 128-37-0	sediment (freshwater)				0,0996 mg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	sediment (marine water)				0,00996 mg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	Soil				0,04769 mg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	oral				8,33 mg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	aqua (intermittent releases)		0,00199 mg/l				
2,6-Di-tert-butyl-p-cresol 128-37-0	Air						no hazard identified

**Derived No-Effect Level (DNEL):**

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Methyl acetate 79-20-9	Workers	inhalation	Long term exposure - systemic effects		610 mg/m <sup>3</sup>	no hazard identified
Methyl acetate 79-20-9	Workers	inhalation	Long term exposure - local effects		305 mg/m <sup>3</sup>	no hazard identified
Methyl acetate 79-20-9	Workers	dermal	Long term exposure - systemic effects		88 mg/kg	no hazard identified
Methyl acetate 79-20-9	General population	inhalation	Long term exposure - systemic effects		131 mg/m <sup>3</sup>	no hazard identified
Methyl acetate 79-20-9	General population	inhalation	Long term exposure - local effects		152 mg/m <sup>3</sup>	no hazard identified
Methyl acetate 79-20-9	General population	dermal	Long term exposure - systemic effects		44 mg/kg	no hazard identified
Methyl acetate 79-20-9	General population	oral	Long term exposure - systemic effects		44 mg/kg	no hazard identified
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	Workers	inhalation	Long term exposure - systemic effects		2035 mg/m <sup>3</sup>	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	Workers	dermal	Long term exposure - systemic effects		773 mg/kg	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	General population	inhalation	Long term exposure - systemic effects		608 mg/m <sup>3</sup>	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	General population	dermal	Long term exposure - systemic effects		699 mg/kg	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	General population	oral	Long term exposure - systemic effects		699 mg/kg	
Ethyl acetate 141-78-6	Workers	inhalation	Acute/short term exposure - systemic effects		1468 mg/m <sup>3</sup>	no hazard identified
Ethyl acetate 141-78-6	Workers	inhalation	Acute/short term exposure - local effects		1468 mg/m <sup>3</sup>	no hazard identified
Ethyl acetate 141-78-6	Workers	dermal	Long term exposure - systemic effects		63 mg/kg	no hazard identified
Ethyl acetate 141-78-6	Workers	inhalation	Long term exposure - systemic effects		734 mg/m <sup>3</sup>	no hazard identified
Ethyl acetate 141-78-6	Workers	inhalation	Long term exposure - local effects		734 mg/m <sup>3</sup>	no hazard identified
Ethyl acetate 141-78-6	General population	Inhalation	Acute/short term exposure - systemic effects		734 mg/m <sup>3</sup>	no hazard identified
Ethyl acetate 141-78-6	General population	inhalation	Acute/short term exposure - local effects		734 mg/m <sup>3</sup>	no hazard identified
Ethyl acetate 141-78-6	General population	dermal	Long term exposure - systemic effects		37 mg/kg	no hazard identified
Ethyl acetate 141-78-6	General population	inhalation	Long term exposure - systemic effects		367 mg/m <sup>3</sup>	no hazard identified
Ethyl acetate 141-78-6	General population	oral	Long term exposure - systemic effects		4,5 mg/kg	no hazard identified
Ethyl acetate 141-78-6	General population	inhalation	Long term exposure - local		367 mg/m <sup>3</sup>	no hazard identified

			effects			
n-Hexane 110-54-3	Workers	inhalation	Long term exposure - systemic effects		75 mg/m3	
n-Hexane 110-54-3	Workers	dermal	Long term exposure - systemic effects		11 mg/kg	
n-Hexane 110-54-3	General population	inhalation	Long term exposure - systemic effects		16 mg/m3	
n-Hexane 110-54-3	General population	dermal	Long term exposure - systemic effects		5,3 mg/kg	
n-Hexane 110-54-3	General population	oral	Long term exposure - systemic effects		4 mg/kg	
2,6-Di-tert-butyl-p-cresol 128-37-0	Workers	inhalation	Long term exposure - systemic effects		3,5 mg/m3	no hazard identified
2,6-Di-tert-butyl-p-cresol 128-37-0	Workers	dermal	Long term exposure - systemic effects		0,5 mg/kg	no hazard identified
2,6-Di-tert-butyl-p-cresol 128-37-0	General population	inhalation	Long term exposure - systemic effects		0,86 mg/m3	no hazard identified
2,6-Di-tert-butyl-p-cresol 128-37-0	General population	dermal	Long term exposure - systemic effects		0,25 mg/kg	no hazard identified
2,6-Di-tert-butyl-p-cresol 128-37-0	General population	oral	Long term exposure - systemic effects		0,25 mg/kg	no hazard identified

### Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
n-Hexane 110-54-3	Hexane-2,5-dione plus 4,5-Dihydroxy-2-hexanone (with hydrolysis)	Urine	Sampling time: End of shift.	5 mg/l	DE BGW		

### 8.2. Exposure controls:

#### Respiratory protection:

The product should only be used at workplaces with intensive ventilation/extraction. If intensive ventilation/extraction is not possible then self-contained independent respiratory protection should be worn.

#### Hand protection:

Recommended are gloves made from Nitril rubber ( Material thickness >0,1 mm, Perforation time < 30s).Gloves should be replaced after each short time contact or contamination. Available at laboratory specialized trade or at pharmacies / chemist's shops.

In the case of longer contact protective gloves made from chloroprene rubber are recommended according to EN 374. material thickness > 0.6 mm

Perforation time > 10 minutes

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

#### Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:  
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

Delivery form	pressurized can
Colour	Colourless / Colorless
Odor	Solvent
Physical state	liquid
Melting point	Not applicable, Product is a liquid
Solidification temperature	< -25 °C (< -13 °F)
Initial boiling point	52 °C (125.6 °F)
Flammability	Flammable aerosol.
Explosive limits	
lower	0,8 %(V);
Flash point	Not applicable, Flammable aerosol.
Auto-ignition temperature	> 200 °C (> 392 °F) literature value
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH	Not applicable, Product is non-soluble (in water).
Viscosity (kinematic) (23 °C (73 °F); )	100 - 130 mm <sup>2</sup> /s
Flow cup viscosity (23 °C (73.4 °F); Nozzle: 25 mm ;; Flowcup Viscosity; HT-Method)	25 s Flowcup Viscosity; HT-Method
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Not miscible
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure (25 °C (77 °F))	Mixture 25 kPa;no method / method unknown
Vapour pressure (55 °C (131 °F))	950,0000000 mbar
Vapour pressure (50 °C (122 °F))	790 mbar literature value
Vapour pressure (20 °C (68 °F))	230 mbar literature value
Density (20 °C (68 °F))	0,87 - 0,89 g/cm <sup>3</sup>
Relative vapour density: (20 °C)	3,18
Particle characteristics	Not applicable Product is a liquid

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Aerosols:	Classified as Aerosol category 1 because it contains more than 1 % (by mass) flammable components or has a heat of combustion of at least 20 kJ/g and is not submitted to the flammability classification procedures
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## SECTION 10: Stability and reactivity

**10.1. Reactivity**

None if used for intended purpose.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

See section reactivity

**10.4. Conditions to avoid**

Temperatures over appr. 50 °C

**10.5. Incompatible materials**

None if used properly.

**10.6. Hazardous decomposition products**

None known.

## SECTION 11: Toxicological information

**11.1 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.

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

Hazardous substances CAS-No.	Value type	Value	Species	Method
Methyl acetate 79-20-9	LD50	6.482 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	LD50	> 5.840 mg/kg	rat	not specified
Ethyl acetate 141-78-6	LD50	6.100 mg/kg	rat	not specified
n-Hexane 110-54-3	LD50	16.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Butyl hydroxytoluene 128-37-0	LD50	> 6.000 mg/kg	rat	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.

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

Hazardous substances CAS-No.	Value type	Value	Species	Method
Methyl acetate 79-20-9	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	LD50	> 2.800 mg/kg	rat	not specified
Ethyl acetate 141-78-6	LD50	> 20.000 mg/kg	rabbit	Draize Test
n-Hexane 110-54-3	LD50	> 2.000 mg/kg	rabbit	not specified
Butyl hydroxytoluene 128-37-0	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)

**Acute inhalative toxicity:**

The toxicity of the product is due to its narcotic effect after inhalation.  
In the event of protracted or repeated exposure, damage to health cannot be excluded.

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

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Methyl acetate 79-20-9	LC50	> 49,2 mg/l	vapour	4 h	rabbit	not specified
Isobutane 75-28-5	LC50	260200 ppm	gas	4 h	mouse	not specified
Propane 74-98-6	LC50	> 800000 ppm	gas	15 min	rat	not specified
Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane -----	LC50	> 25,2 mg/l	vapour	4 h	rat	not specified
Ethyl acetate 141-78-6	LC50	57,7 mg/l	vapour	4 h	rat	not specified
Ethyl acetate 141-78-6	LC50	> 22,5 mg/l	vapour	6 h	rat	other guideline:
n-Hexane 110-54-3	LC50	> 31,86 mg/l	vapour	4 h	rat	not specified

**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
Methyl acetate 79-20-9	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane -----	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Ethyl acetate 141-78-6	slightly irritating	24 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
n-Hexane 110-54-3	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Butyl hydroxytoluene 128-37-0	not irritating	4 h	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
Methyl acetate 79-20-9	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane -----	not irritating		rabbit	FDA Guideline
Ethyl acetate 141-78-6	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
n-Hexane 110-54-3	not irritating		rabbit	not specified
Butyl hydroxytoluene 128-37-0	not irritating		rabbit	Draize Test

**Respiratory or skin sensitization:**

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

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

Hazardous substances CAS-No.	Result	Test type	Species	Method
Methyl acetate 79-20-9	not sensitising	Skin sensitisation	human	Weight of evidence
Ethyl acetate 141-78-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
n-Hexane 110-54-3	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Butyl hydroxytoluene 128-37-0	not sensitising	Draize Test	guinea pig	Draize Test

**Germ cell mutagenicity:**

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

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

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Methyl acetate 79-20-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Isobutane 75-28-5	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Isobutane 75-28-5	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Propane 74-98-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Propane 74-98-6	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Ethyl acetate 141-78-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Ethyl acetate 141-78-6	negative	in vitro mammalian chromosome aberration test	with and without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
n-Hexane 110-54-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
n-Hexane 110-54-3	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Butyl hydroxytoluene 128-37-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
Butyl hydroxytoluene 128-37-0	negative	in vitro mammalian chromosome aberration test	with and without		not specified
Butyl hydroxytoluene 128-37-0	negative	mammalian cell gene mutation assay	with		not specified
Methyl acetate 79-20-9	negative	inhalation		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Isobutane 75-28-5	negative	oral: feed		Drosophila melanogaster	not specified
Isobutane 75-28-5	negative	inhalation: gas		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Propane 74-98-6	negative			Drosophila melanogaster	not specified
Propane 74-98-6	negative	inhalation: gas		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Ethyl acetate 141-78-6	negative	oral: gavage		hamster, Chinese	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
n-Hexane 110-54-3	negative	inhalation: vapour		mouse	not specified
n-Hexane 110-54-3	negative	inhalation: vapour		rat	not specified
Butyl hydroxytoluene 128-37-0	negative	oral: feed		rat	not specified
Butyl hydroxytoluene 128-37-0	negative	intraperitoneal		mouse	not specified

**Carcinogenicity**

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

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

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
n-Hexane 110-54-3	not carcinogenic	inhalation: vapour	2 y 6 h/d; 5 d/w	mouse	female	OECD Guideline 451 (Carcinogenicity Studies)
Butyl hydroxytoluene 128-37-0	not carcinogenic	oral: feed	2 y daily	rat	male	not specified

**Reproductive toxicity:**

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

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

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Methyl acetate 79-20-9	NOAEL P 1,3 mg/l NOAEL F1 0,13 mg/l NOAEL F2 0,13 mg/l	Two generation study	inhalation	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Isobutane 75-28-5	NOAEL P 21,4 mg/l NOAEL F1 21,4 mg/l	screening	inhalation: gas	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Propane 74-98-6	NOAEL P 21,6 mg/l NOAEL F1 21,6 mg/l	screening	inhalation: gas	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Ethyl acetate 141-78-6	NOAEL P 1500 ppm	other:	inhalation	rat	other guideline:
n-Hexane 110-54-3	NOAEL P 9000 ppm NOAEL F1 3000 ppm NOAEL F2 3000 ppm	Two generation study	inhalation: vapour	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Butyl hydroxytoluene 128-37-0	NOAEL P 500 mg/kg	Two generation study	oral: feed	rat	not specified

**STOT-single exposure:**

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

Hazardous substances CAS-No.	Assessment	Route of exposure	Target Organs	Remarks
Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane -----	Category 3 with narcotic effects.			
Ethyl acetate 141-78-6	May cause drowsiness or dizziness.			
n-Hexane 110-54-3	May cause drowsiness or dizziness.			

**STOT-repeated exposure:**

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

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

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Methyl acetate 79-20-9	NOAEL 350 ppm	inhalation: aerosol	28 d 6 h/d, 5 d/w	rat	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
Isobutane 75-28-5	NOAEL 9000 ppm	inhalation: gas	28 d 6 h/d, 7 d/w	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Propane 74-98-6		inhalation: gas	28 d 6 h/d, 7 d/w	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Ethyl acetate 141-78-6	NOAEL 900 mg/kg	oral: gavage	90 d daily	rat	EPA OTS 795.2600 (Subchronic Oral Toxicity Test)
n-Hexane 110-54-3	NOAEL 40 mg/kg	oral: gavage	13 weeks daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
n-Hexane 110-54-3	NOAEL 13,2 mg/kg	oral: gavage	90-120 d 5 d / week	rat	not specified
Butyl hydroxytoluene 128-37-0	NOAEL 25 mg/kg	oral: feed	22 months daily	rat	not specified

**Aspiration hazard:**

The mixture is classified based on Viscosity data.

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

Hazardous substances CAS-No.	Viscosity (kinematic) Value	Temperature	Method	Remarks
Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane -----	0,61 mm <sup>2</sup> /s	25 °C	not specified	
n-Hexane 110-54-3	0,45 mm <sup>2</sup> /s	25 °C	not specified	

**11.2 Information on other hazards****11.2.1 Endocrine disrupting properties**

No data available.

## SECTION 12: Ecological information

### General ecological information:

Do not empty into drains, soil or bodies of water.

### 12.1. Toxicity

#### Toxicity (Fish):

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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Methyl acetate 79-20-9	LC50	250 - 350 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane -----	LL50	11,4 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethyl acetate 141-78-6	LC50	220 mg/l	96 h	Pimephales promelas	other guideline:
n-Hexane 110-54-3	LC50	> 1 - 10 mg/l	96 h	not specified	OECD Guideline 203 (Fish, Acute Toxicity Test)
Butyl hydroxytoluene 128-37-0	LC50	Toxicity > Water solubility	96 h	Brachydanio rerio (new name: Danio rerio)	EU Method C.1 (Acute Toxicity for Fish)
Butyl hydroxytoluene 128-37-0	NOEC	0,053 mg/l	30 d	Oryzias latipes	OECD Guideline 210 (fish early life stage toxicity test)

#### Toxicity (aquatic invertebrates):

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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Methyl acetate 79-20-9	EC50	1.026,7 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane -----	EL50	3 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Ethyl acetate 141-78-6	EC50	164 mg/l	48 h	Daphnia cucullata	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
n-Hexane 110-54-3	EC50	2,1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Butyl hydroxytoluene 128-37-0	EC50	0,48 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

#### Chronic toxicity (aquatic invertebrates):

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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane -----	NOEC	0,17 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Ethyl acetate 141-78-6	NOEC	2,4 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Butyl hydroxytoluene 128-37-0	NOEC	0,069 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.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Methyl acetate 79-20-9	EC50	> 120 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methyl acetate 79-20-9	NOEC	120 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	EL50	> 30 - 100 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	NOELR	3 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethyl acetate 141-78-6	EC50	> 2.000 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethyl acetate 141-78-6	NOEC	2.000 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
n-Hexane 110-54-3	EC50	> 1 - 10 mg/l	72 h	not specified	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butyl hydroxytoluene 128-37-0	EC50	Toxicity > Water solubility	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Butyl hydroxytoluene 128-37-0	EC10	0,4 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	EU Method C.3 (Algal Inhibition test)

**Toxicity (microorganisms):**

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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Methyl acetate 79-20-9	EC10	1.830 mg/l	16 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
Ethyl acetate 141-78-6	EC10	2.900 mg/l	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
n-Hexane 110-54-3	EC50	> 1 - 10 mg/l	3 h	not specified	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Butyl hydroxytoluene 128-37-0	EC50	Toxicity > Water solubility	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

**12.2. Persistence and degradability**

**Biodegradability (Screening Tests):**

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Methyl acetate 79-20-9	readily biodegradable	aerobic	70 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Methyl acetate 79-20-9	inherently biodegradable	aerobic	> 95 %	6 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Isobutane 75-28-5	readily biodegradable	aerobic	> 60 %	28 d	OECD 301 A - F
Propane 74-98-6	readily biodegradable	aerobic	> 60 %	28 d	OECD 301 A - F
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane -----	readily biodegradable	aerobic	98 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Ethyl acetate 141-78-6	readily biodegradable	aerobic	100 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
n-Hexane 110-54-3	readily biodegradable	aerobic	81 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Butyl hydroxytoluene 128-37-0	not readily biodegradable.	aerobic	4,5 %	28 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Butyl hydroxytoluene 128-37-0	not inherently biodegradable	aerobic	5,2 - 5,6 %	35 d	OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II))

**(Bio)degradability (Simulation Tests):**

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Environmental Compartment	DT50	Temperature	Method
Butyl hydroxytoluene 128-37-0	Fresh water	> 3,7 - 8,6 day		OECD Test Guideline 309
Butyl hydroxytoluene 128-37-0	Soil	0,6 day		OECD Test Guideline 307

**12.3. Bioaccumulative potential**

**Partition Coefficient (octanol/water)**

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
Methyl acetate 79-20-9	0,18		other guideline:
Isobutane 75-28-5	2,88	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Ethyl acetate 141-78-6	0,68	25 °C	EPA OPPTS 830.7560 (Partition Coefficient, n-octanol / H <sub>2</sub> O, Generator Column Method)
n-Hexane 110-54-3	4	20 °C	other guideline:
Butyl hydroxytoluene 128-37-0	5,1		OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

**Bioconcentration factor (BCF)**

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Ethyl acetate 141-78-6	30	3 d	22,5 °C	Leuciscus idus melanotus	other guideline:
Butyl hydroxytoluene 128-37-0	330 - 1.800	56 d		Cyprinus carpio	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT / vPvB / PMT / vPvM assessment****PBT/vPvB**

This mixture does not contain any substances that are assessed to be a PBT or vPvB. Based on available data, the classification criteria are not met.

**PMT/vPvM**

This mixture does not contain any substances that are assessed to be a PMT or vPvM. Based on available data, the classification criteria are not met.

**12.6. Endocrine disrupting properties**

No data available.

**12.7. Other adverse effects**

No data available.

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

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code

080409

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

ADR	1950
RID	1950
ADN	1950
IMDG	1950
IATA	1950

**14.2. UN proper shipping name**

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

**14.3. Transport hazard class(es)**

ADR	2.1
RID	2.1
ADN	2.1
IMDG	2.1
IATA	2.1

**14.4. Packing group**

ADR  
RID  
ADN  
IMDG  
IATA

**14.5. Environmental hazards**

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

**14.6. Special precautions for user**

ADR	not applicable Tunnelcode: (D)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

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

not applicable

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**SECTION 15: Regulatory information**

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 2024/590):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable

Seveso III (2012/18/EU): P3a, Flammable aerosols

**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)

Storage class according to TRGS 510: 2B

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**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:

H220 Extremely flammable gas.  
H225 Highly flammable liquid and vapour.  
H280 Contains gas under pressure; may explode if heated.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H361f Suspected of damaging fertility.  
H372 Causes damage to organs through prolonged or repeated exposure.  
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.

Abbreviations and acronyms:

ADG(-Code): Australian Dangerous Goods (Code)  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road  
ASTM: American Society for Testing and Materials  
ATE: acute toxicity estimate  
AS: Australian Standard  
AwSV: Ordinance on Installations for the Handling of Substances Hazardous to Water  
CAS: Chemical Abstract Service  
CLP: Regulation (EC) No 1272/2008  
CMR: cancerogenic, mutagenic or reprotoxic  
DIN: German Institute for Standardization  
ECx: Effective concentration (x% effective level)  
ECHA: European Chemicals Agency  
EC-Nummer: Substance number in the EU-inventories EINECS/ELINCS  
ECTLV: European community threshold limit value  
ED: Substance identified as having endocrine disrupting properties  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
EN : European Standard  
ENCS: Japanese chemical inventory  
EPA: US Environmental Protection Agency  
EU: European Union  
EU EXPLD1: Substance listed in Annex I, Reg (EC) No. 2019/1148  
EU EXPLD2: Substance listed in Annex II, Reg (EC) No. 2019/1148  
EWC: European Waste Catalogue  
GHS: Globally Harmonised System for Classification and Labelling of Chemicals  
GLP: Good Laboratory Practice  
HSNO: Hazardous Substances and New Organisms  
IARC: International Agency for Research of Cancer  
IATA: International Air Transport Association  
IBC-Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IC50: half maximal inhibitory concentration  
ICAO: International Civil Aviation Organization  
IMDG-Code: International Maritime Code for Dangerous Goods  
IMO: International Maritime Organization  
ISO: International Standardization Organisation  
LC50: Median lethal concentration  
LD50: Median lethal dose  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
n.o.s.: not otherwise specified  
NO(A)EC: No (adverse) effect concentration  
NO(A)EL: No (adverse) effect level  
NZS: New Zealand Standard  
OECD: Organisation for Economic Co-operation and Development  
OEL: Occupational Exposure Limit  
OPPT: US EPA Office of Pollution Prevention and Toxics

OPPTS: US EPA Office of Prevention, Pesticides and Toxic Substances  
PBT: Persistent, bioaccumulative, toxic  
PMT: Persistent, mobile and toxic  
(Q)SAR: (Quantitative) structure–activity relationship  
REACH: Regulation (EC) No. 1907/2006  
RID: Regulations concerning the International Transport of Dangerous Goods by Rail  
SADT: Self Accelerating Decomposition Temperature  
SDS: Safety Data Sheet  
STOT: Specific Target Organ Toxicity  
STOT SE: Specific Target Organ Toxicity - single exposure  
STOT RE: Specific Target Organ Toxicity - repeated exposure  
SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons  
SVHC: Substance of very high concern (REACH Candidate List)  
TRGS: German Technical Rules for hazardous substances  
UN: United Nations  
VOC: Volatile Organic Compound  
814.018 VOC Reg CH: Swiss Ordinance 814.018 on the Incentive Tax on Volatile Organic Compounds  
vPvB: Very persistent, very bioaccumulative  
vPvM: Very persistent and very mobile  
VwVwS: Administrative Regulation on Substances Hazardous to Waters  
WGK: Water hazard class

**Further information:**

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