

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Nitro thinner technical

article number: **3036**
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Identification of the substance **Nitro thinner technical**
Article number 3036

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

Relevant identified uses: Laboratory chemical
Laboratory and analytical use
Uses advised against: Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone:+49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
e-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

e-mail (competent person): **sicherheit@carlroth.de**

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
2.6	Flammable liquid	2	Flam. Liq. 2	H225
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.7	Reproductive toxicity	2	Repr. 2	H361fd
3.8D	Specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336

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Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.9	Specific target organ toxicity - repeated exposure	2	STOT RE 2	H373
3.10	Aspiration hazard	1	Asp. Tox. 1	H304
4.1C	Hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

Supplemental hazard information

Code	Supplemental hazard information
EUH066	repeated exposure may cause skin dryness or cracking

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure. The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS02, GHS07,
GHS08



Hazard statements

H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child (if inhaled)
H373	May cause damage to organs (nervous system) through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

Precautionary statements

Precautionary statements - prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280	Wear protective gloves/eye protection

Precautionary statements - response

P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310	Immediately call a POISON CENTER/doctor

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Precautionary statements - storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed

For professional users only

Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

Hazardous ingredients for labelling:

Hydrocarbons, C₆, n-alkanes, iso-alkanes, cyclics, 5-60% n-hexane, Acetone, Acetic acid ethyl ester

2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.














SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Acetic acid ethyl ester	CAS No 141-78-6 EC No 205-500-4	25 - 50	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336 EUH066	 	GHS-HC IOELV
Acetone	CAS No 67-64-1 EC No 200-662-2	25 - 50	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336 EUH066	 	GHS-HC IOELV
Hydrocarbons, C ₆ , n-alkanes, iso-alkanes, cyclics, 5-60% n-hexane	CAS No 64742-49-0 EC No 925-292-5	< 20	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315 Repr. 2 / H361fd STOT SE 3 / H336 STOT RE 2 / H373 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	   	IOELV
Tetrahydrofuran	CAS No 109-99-9 EC No 203-726-8	< 1	Flam. Liq. 2 / H225 Acute Tox. 4 / H302 Eye Irrit. 2 / H319 Carc. 2 / H351 STOT SE 3 / H335 EUH019	  	GHS-HC IARC: 2B IOELV
Dichloromethane	CAS No 75-09-2 EC No 200-838-9	< 1	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Carc. 2 / H351 STOT SE 3 / H336	 	GHS-HC IARC: 2A IOELV

Notes

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

IARC: IARC group 2A: probably carcinogenic to humans (International Agency for Research on Cancer)

2A:
IARC: IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer)

2B:

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Notes

IOELV: Substance with a community indicative occupational exposure limit value

Name of substance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
Tetrahydrofuran	CAS No 109-99-9 EC No 203-726-8	Eye Irrit. 2; H319: C ≥ 25 % STOT SE 3; H335: C ≥ 25 %	-	1.650 mg/kg	oral

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Call a physician immediately. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Observe aspiration hazard if vomiting occurs.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation: Dizziness, Drowsiness, Narcosis, Headache, Vertigo,
Following skin contact: Irritation, Localised redness, oedema, pruritis and/or pain,
After eye contact: Irritation,
Following ingestion: Nausea, Aspiration hazard

4.3 Indication of any immediate medical attention and special treatment needed

none

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SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings
water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours may form explosive mixtures with air.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. Danger of explosion.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

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6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation. Avoid exposure.

Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage

of vapours into cellars, flues and ditches.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Ground/bond container and receiving equipment.

Ventilation requirements

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

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Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
EU	tetrahydrofuran	109-99-9	IOELV	50	150	100	300			H	2000/39/EC
EU	n-hexane	110-54-3	IOELV	20	72						2006/15/EC
EU	ethyl acetate	141-78-6	IOELV	200	734	400	1.468				2017/164/EU
EU	acetone	67-64-1	IOELV	500	1.210						2000/39/EC
EU	methylene chloride (dichloromethane)	75-09-2	IOELV	100	353	200	706			H	2017/164/EU
GB	tetrahydrofuran	109-99-9	WEL	50	150	100	300				EH40/2005
GB	n-hexane	110-54-3	WEL	20	72						EH40/2005
GB	ethyl acetate	141-78-6	WEL	200	734	400	1.468				EH40/2005
GB	acetone	67-64-1	WEL	500	1.210	1.500	3.620				EH40/2005
GB	dichloromethane	75-09-2	WEL	100	353	200	706				EH40/2005

Notation

- Ceiling-C Ceiling value is a limit value above which exposure should not occur
H Absorbed through the skin
STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Biological limit values

Country	Name of agent	CAS No	Parameter	Notation	Identifier	Value	Material	Source
GB	dichloromethane	75-09-2	carbon monoxide		BMGV	30 ppm	end-tidal breath	EH40/2005

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Acetone	67-64-1	DNEL	1.210 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Acetone	67-64-1	DNEL	2.420 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Acetone	67-64-1	DNEL	186 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Acetic acid ethyl ester	141-78-6	DNEL	734 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

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Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Acetic acid ethyl ester	141-78-6	DNEL	1.468 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Acetic acid ethyl ester	141-78-6	DNEL	734 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Acetic acid ethyl ester	141-78-6	DNEL	1.468 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Acetic acid ethyl ester	141-78-6	DNEL	63 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Hydrocarbons, C ₆ , n-alkanes, iso-alkanes, cyclics, 5-60% n-hexane	64742-49-0	DNEL	93 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Hydrocarbons, C ₆ , n-alkanes, iso-alkanes, cyclics, 5-60% n-hexane	64742-49-0	DNEL	13 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Dichloromethane	75-09-2	DNEL	706 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Dichloromethane	75-09-2	DNEL	176 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Dichloromethane	75-09-2	DNEL	12 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Tetrahydrofuran	109-99-9	DNEL	72,4 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Tetrahydrofuran	109-99-9	DNEL	96 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Tetrahydrofuran	109-99-9	DNEL	150 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Tetrahydrofuran	109-99-9	DNEL	300 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Tetrahydrofuran	109-99-9	DNEL	12,6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Acetone	67-64-1	PNEC	10,6 mg/l	aquatic organisms	freshwater	short-term (single instance)
Acetone	67-64-1	PNEC	1,06 mg/l	aquatic organisms	marine water	short-term (single instance)
Acetone	67-64-1	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Acetone	67-64-1	PNEC	30,4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Acetone	67-64-1	PNEC	3,04 mg/kg	aquatic organisms	marine sediment	short-term (single instance)

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Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Acetone	67-64-1	PNEC	29,5 mg/kg	terrestrial organisms	soil	short-term (single instance)
Acetic acid ethyl ester	141-78-6	PNEC	1,65 mg/l	aquatic organisms	water	intermittent release
Acetic acid ethyl ester	141-78-6	PNEC	0,24 mg/l	aquatic organisms	freshwater	short-term (single instance)
Acetic acid ethyl ester	141-78-6	PNEC	0,024 mg/l	aquatic organisms	marine water	short-term (single instance)
Acetic acid ethyl ester	141-78-6	PNEC	650 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Acetic acid ethyl ester	141-78-6	PNEC	1,15 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Acetic acid ethyl ester	141-78-6	PNEC	0,115 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Acetic acid ethyl ester	141-78-6	PNEC	0,148 mg/kg	terrestrial organisms	soil	short-term (single instance)
Dichloromethane	75-09-2	PNEC	0,31 mg/l	aquatic organisms	freshwater	short-term (single instance)
Dichloromethane	75-09-2	PNEC	0,031 mg/l	aquatic organisms	marine water	short-term (single instance)
Dichloromethane	75-09-2	PNEC	26 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Dichloromethane	75-09-2	PNEC	2,57 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Dichloromethane	75-09-2	PNEC	0,26 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Dichloromethane	75-09-2	PNEC	0,33 mg/kg	terrestrial organisms	soil	short-term (single instance)
Tetrahydrofuran	109-99-9	PNEC	67 mg/kg	aquatic organisms	water	short-term (single instance)
Tetrahydrofuran	109-99-9	PNEC	4,32 mg/l	aquatic organisms	freshwater	short-term (single instance)
Tetrahydrofuran	109-99-9	PNEC	0,432 mg/l	aquatic organisms	marine water	short-term (single instance)
Tetrahydrofuran	109-99-9	PNEC	4,6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Tetrahydrofuran	109-99-9	PNEC	23,3 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Tetrahydrofuran	109-99-9	PNEC	2,33 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Tetrahydrofuran	109-99-9	PNEC	2,13 mg/kg	terrestrial organisms	soil	short-term (single instance)

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8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

Butyl caoutchouc (butyl rubber)

• material thickness

0,7mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Flame-retardant protective clothing.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: AX (gas filters and combined filters against low-boiling point organic compounds, colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless - clear
Odour	characteristic
Melting point/freezing point	-50 °C
Boiling point or initial boiling point and boiling range	>56 °C
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	470 g/m ³ (UEL) / 1,8 vol% (LEL) - 13 vol% (UEL)
Flash point	-20 °C
Auto-ignition temperature	>201 °C (auto-ignition temperature (liquids and gases))
Decomposition temperature	not relevant
pH (value)	6 – 8
Kinematic viscosity	not determined
<u>Solubility(ies)</u>	
Water solubility	not determined
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	this information is not available
Vapour pressure	230 mbar
<u>Density and/or relative density</u>	
Density	0,8 – 0,88 g/cm ³ at 20 °C
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)
<u>Other safety parameters</u>	
Oxidising properties	none

9.2 Other information

Information with regard to physical hazard classes:	There is no additional information.
Other safety characteristics:	There is no additional information.

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SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition. Vapours may form explosive mixtures with air.

If heated

Risk of ignition.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser, Perchlorates, Nitric acid, Sulphuric acid, concentrated

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Tetrahydrofuran	109-99-9	oral	1.650 mg/kg

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Acetone	67-64-1	oral	LD50	5.800 mg/kg	rat
Acetic acid ethyl ester	141-78-6	oral	LD50	5.620 mg/kg	rat
Acetic acid ethyl ester	141-78-6	dermal	LD50	>20.000 mg/kg	rabbit
Dichloromethane	75-09-2	oral	LD50	>2.000 mg/kg	rat
Dichloromethane	75-09-2	dermal	LD50	>2.000 mg/kg	rat

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Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Tetrahydrofuran	109-99-9	oral	LD50	1.650 mg/kg	rat
Tetrahydrofuran	109-99-9	dermal	LD50	>2.000 mg/kg	rat

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Suspected of damaging the unborn child (if inhaled). Suspected of damaging fertility (if inhaled).

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

May cause damage to organs (nervous system) through prolonged or repeated exposure.

Hazard category	Target organ	Exposure route
2	nervous system	if exposed

Aspiration hazard

May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

diarrhoea, abdominal pain, nausea, aspiration hazard

• If in eyes

Causes serious eye irritation

• If inhaled

cough, Dyspnoea, fatigue, narcosis, Irritation to respiratory tract

• If on skin

pruritis, localised redness, causes skin irritation

• Other information

none

11.2 Endocrine disrupting properties

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None of the ingredients are listed.

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Acetone	67-64-1	LC50	5.540 mg/l	fish	96 h
Acetic acid ethyl ester	141-78-6	LC50	230 mg/l	fish	96 h
Acetic acid ethyl ester	141-78-6	EC50	220 mg/l	fish	96 h
Dichloromethane	75-09-2	LC50	193 mg/l	fish	96 h
Tetrahydrofuran	109-99-9	LC50	2.160 mg/l	Pimephales promelas	96 h
Tetrahydrofuran	109-99-9	EC50	1.930 mg/l	Pimephales promelas	96 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Acetone	67-64-1	EC50	61,15 g/l	microorganisms	30 min
Dichloromethane	75-09-2	LC50	471 mg/l	fish	8 d
Dichloromethane	75-09-2	EC50	2.590 mg/l	microorganisms	40 min

Biodegradation

Data are not available.

12.2 Process of degradability

Degradability of components of the mixture						
Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Acetone	67-64-1	carbon dioxide generation	90,9 %	28 d		ECHA
Acetic acid ethyl ester	141-78-6	biotic/abiotic	100 %	28 d		
Acetic acid ethyl ester	141-78-6	oxygen depletion	62 %	5 d		ECHA
Dichloromethane	75-09-2	biotic/abiotic	5 - 26 %	28 d		
Dichloromethane	75-09-2	oxygen depletion	68 %	28 d		ECHA

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Degradability of components of the mixture						
Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Tetrahydrofuran	109-99-9	biotic/abiotic	39 %	28 d		
Tetrahydrofuran	109-99-9	oxygen depletion	39 %	28 d		ECHA

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture				
Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Acetone	67-64-1		-0,23	963,5
Acetic acid ethyl ester	141-78-6	30	0,68 (pH value: 7, 25 °C)	
Hydrocarbons, C ₆ , n-alkanes, iso-alkanes, cyclics, 5-60% n-hexane	64742-49-0	501,2	4	
Dichloromethane	75-09-2	39	1,25 (pH value: 7, 20 °C)	
Tetrahydrofuran	109-99-9		0,45 (pH value: 7, 25 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

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13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number or ID number

ADRRID	UN 1993
IMDG-Code	UN 1993
ICAO-TI	UN 1993

14.2 UN proper shipping name

ADRRID	FLAMMABLE LIQUID, N.O.S.
IMDG-Code	FLAMMABLE LIQUID, N.O.S.
ICAO-TI	Flammable liquid, n.o.s.
Technical name (hazardous ingredients)	Acetic acid ethyl ester, Acetone

14.3 Transport hazard class(es)

ADRRID	3
IMDG-Code	3
ICAO-TI	3

14.4 Packing group

ADRRID	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

Proper shipping name	FLAMMABLE LIQUID, N.O.S.
Particulars in the transport document	UN1993, FLAMMABLE LIQUID, N.O.S., (contains: Acetic acid ethyl ester, Acetone), 3, II, (D/E), special provision 640D
Classification code	F1

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Danger label(s) 3



Special provisions (SP) 274, 601, 640D

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

Transport category (TC) 2

Tunnel restriction code (TRC) D/E

Hazard identification No 33

Emergency Action Code 3YE

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

Classification code F1

Danger label(s) 3



Special provisions (SP) 274, 601, 640D

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

Transport category (TC) 2

Hazard identification No 33

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name FLAMMABLE LIQUID, N.O.S.

Particulars in the shipper's declaration UN1993, FLAMMABLE LIQUID, N.O.S., (contains: Acetic acid ethyl ester, Acetone), 3, II, -20°C c.c.

Marine pollutant -

Danger label(s) 3



Special provisions (SP) 274

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

EmS F-E, S-E

Stowage category B

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International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name	Flammable liquid, n.o.s.
Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (contains: Acetic acid ethyl ester, Acetone), 3, II
Danger label(s)	3
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Seveso Directive

2012/18/EU (Seveso III)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
P5c	flammable liquids (cat. 2, 3)	5.000	50.000	51)

Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

Deco-Paint Directive

VOC content	100 % 880 g/l
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Industrial Emissions Directive (IED)

VOC content	100 %
VOC content (Water content was discounted)	880 g/l

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Pollutant release and transfer registers (PRTR)			
Name of substance	CAS No	Remarks	Threshold for releases to air (kg/year)
Dichloromethane	75-09-2		1 000

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Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Tetrahydrofuran	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
Hydrocarbons, C ₆ , n-alkanes, iso-alkanes, cyclics, 5-60% n-hexane	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
Acetone	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
Dichloromethane	dichloromethane	75-09-2	b)	
Dichloromethane	dichloromethane	75-09-2	c)	
Dichloromethane	Organohalogen compounds and substances which may form such compounds in the aquatic environment		a)	
Dichloromethane	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	

Legend

- A) Indicative list of the main pollutants
- B) List of priority substances in the field of water policy
- C) Environmental Quality Standards for Priority Substances and certain other pollutants

Regulation on the marketing and use of explosives precursors

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Explosives precursors which are subject to restrictions

Name of substance	CAS No	Type of registration	Remarks	Limit value	Upper limit value for the purpose of licensing under Article 5(3)
Acetone	67-64-1	Annex II			

Legend

annex II Substances on their own or in mixtures or in substances for which suspicious transactions shall be reported

Additional statements

If the product is passed on to third parties, in accordance with Article 7 "Notification of the supply chain" of Regulation EU 2019/1148, the information obligation is subject to the entire supply chain and all other provisions mentioned in Article 7 on restricted and regulated raw materials.

Regulation on drug precursors

Name of substance	CAS No	Classification	CN Code	Threshold level
Acetone	67-64-1	Category 3	2914 11 00	

Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Nitro thinner	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3
Acetone	flammable / pyrophoric		40

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances

Name of substance	CAS No	Listed in	HS code
Acetone	67-64-1	Table II	2914.11

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation:

Restructuring: section 9, section 14

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1	The most important adverse physicochemical, human health and environmental effects: Delayed or immediate effects can be expected after short or long-term exposure. The product is combustible and can be ignited by potential ignition sources.	The most important adverse physicochemical, human health and environmental effects: Delayed or immediate effects can be expected after short or long-term exposure. The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Hazard statements: change in the listing (table)	yes
2.2	Hazardous ingredients for labelling: Xylene (isomers), 1-Butanol, Toluene, Acetone	Hazardous ingredients for labelling: Hydrocarbons, C ₆ , n-alkanes, iso-alkanes, cyclics, 5-60% n-hexane, Acetone, Acetic acid ethyl ester	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2	contains: Xylene (isomers), 1-Butanol, Toluene, Acetone		yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
2006/15/EC	Commission Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC
2017/164/EU	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)

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Abbr.	Descriptions of used abbreviations
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CN Code	Combined Nomenclature
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HS	Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
IOELV	Indicative occupational exposure limit value

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Abbr.	Descriptions of used abbreviations
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
log KOW	n-Octanol/water
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	Reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture.
Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.

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Code	Text
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child (if inhaled).
H373	May cause damage to organs (nervous system) through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.