safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Nitro thinner tech.

article number: **3036**
Version: **1.0 en**

date of compilation: 2016-06-28

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

1.1 Product identifier

Identification of the substance	**Nitro thinner**
Article number	3036
Registration number (REACH)	not relevant (mixture)

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

Identified uses:	laboratory chemical

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

Emergency information service	**Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS

Section	Hazard class	Hazard class and category	Hazard statement
2.6	flammable liquid	(Flam. Liq. 2)	H225
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Dam. 1)	H318
3.7	reproductive toxicity	(Repr. 2)	H361d
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	(STOT SE 3)	H335
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	(STOT SE 3)	H336
3.9	specific target organ toxicity - repeated exposure	(STOT RE 2)	H373
3.10	aspiration hazard	(Asp. Tox. 1)	H304

Supplemental hazard information

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

Remarks
For full text of Hazard- and EU Hazard-statements: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects
Narcotic effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word **Danger**

Pictograms

Hazard statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Precautionary statements - prevention

P210	Keep away from heat, hot surfaces, sparks, open flames. 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.

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: Xylene (isomers), butyl alcohol (except tert-butyl alcohol), toluene, acetone

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)

H304	May be fatal if swallowed and enters airways.
H318	Causes serious eye damage.
H361d	Suspected of damaging the unborn child.
P280	Wear protective gloves/eye protection.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.
contains:	Xylene (isomers), Butyl alcohol (except tert-butyl alcohol), Toluene, Acetone

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Composition/information on ingredients.

Name of sub-stance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Specific Conc. Limits
Xylene (isomers)	CAS No 1330-20-7 EC No 215-535-7 Index No 601-022-00-9	25	Flam. Liq. 3 / H226 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335 STOT RE 2 / H373 Asp. Tox. 1 / H304		
acetone	CAS No 67-64-1 EC No 200-662-2 Index No 606-001-00-8 REACH Reg. No 01-2119471330-49-xxxx	≤ 50	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Specific Conc. Limits
ethyl acetate	CAS No 141-78-6 EC No 205-500-4 Index No 607-022-00-5 REACH Reg. No 01-2119475103-46-xxxx	≤ 50	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		
Acetic acid methyl ester	CAS No 79-20-9 EC No 201-185-2 Index No 607-021-00-X	≤ 50	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		
ethyl alcohol	CAS No 64-17-5 EC No 200-578-6 Index No 603-002-00-5 REACH Reg. No 01-2119457610-43-XXXX	≤ 15	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319		
2-Butanone	CAS No 78-93-3 EC No 201-159-0 Index No 606-002-00-3 REACH Reg. No 01-2119457290-43-xxxx	≤ 30	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		
n-butyl acetate	CAS No 123-86-4 EC No 204-658-1 Index No 607-025-00-1 REACH Reg. No 01-2119485493-29-xxxx	≤ 40	Flam. Liq. 3 / H226 STOT SE 3 / H336		

Name of sub-stance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Specific Conc. Limits
Propan-2-ol	CAS No 67-63-0 EC No 200-661-7 Index No 603-117-00-0 REACH Reg. No 01-2119457558-25-xxxx	≤ 15	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		
butyl alcohol (except tert-butyl alcohol)	CAS No 71-36-3 EC No 200-751-6 Index No 603-004-00-6 REACH Reg. No 01-2119484630-38-xxxx	3 - 5	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 STOT SE 3 / H336		
toluene	CAS No 108-88-3 EC No 203-625-9 Index No 601-021-00-3 REACH Reg. No 01-2119471310-51-xxxx	< 5	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315 Repr. 2 / H361d STOT SE 3 / H336 STOT RE 2 / H373 Asp. Tox. 1 / H304		
methanol	CAS No 67-56-1 EC No 200-659-6 Index No 603-001-00-X REACH Reg. No 01-2119433307-44-xxxx	≤ 1	Flam. Liq. 2 / H225 Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 3 / H331 STOT SE 1 / H370		STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %

Remarks
For full text of Hazard- and EU Hazard-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off immediately all contaminated clothing. Symptoms can occur only after several hours.

Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact

Wash with plenty of soap and water. Preventive skin protection (barrier creams/ointments) is recommended. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Aspiration hazard. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritation, Cough, Breathing difficulties, Headache, Dizziness, Impairment of vision, Vertigo, Nausea, Vomiting, Diarrhoea, Narcosis, Risk of serious damage to eyes, Aspiration hazard

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, alcohol resistant foam, dry extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Vapours can form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

Vapours are heavier than air. Beware of reignition. 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

Wear suitable protective clothing. Avoid contact with skin and eyes. Do not breathe vapour/spray. Avoidance of ignition sources.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Explosive properties.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

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

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

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

Use only in well-ventilated areas. Avoid exposure. When not in use, keep containers tightly closed.

• 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.

Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight.

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

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Source
EU	toluene	108-88-3		IOELV	50	192	100	384	2006/15/EC
EU	xylene	1330-20-7		IOELV	50	221	100	442	2000/39/EC
EU	methanol	67-56-1		IOELV	200	260			2006/15/EC
EU	acetone	67-64-1		IOELV	500	1.210			2000/39/EC
EU	ethyl methyl ketone	78-93-3		IOELV	200	600	300	900	2000/39/EC
UK	hydrocarbon mixture (RCP method)			WEL		600		1.200	EH40/2005
GB	toluene	108-88-3		WEL	50	191	100	384	EH40/2005
GB	butyl acetate	123-86-4		WEL	150	724	200	966	EH40/2005
GB	xylene, mixture of isomers	1330-20-7		WEL	50	220	100	441	EH40/2005
GB	ethyl acetate	141-78-6		WEL	200		400		EH40/2005
GB	ethanol	64-17-5		WEL	1.000	1.920			EH40/2005
GB	methanol	67-56-1		WEL	200	266	250	333	EH40/2005
GB	propan-2-ol	67-63-0		WEL	400	999	500	1.250	EH40/2005
GB	acetone	67-64-1		WEL	500	1.210	1.500	3.620	EH40/2005
GB	butan-1-ol	71-36-3		WEL			50	154	EH40/2005
GB	butan-2-one (methyl ethyl ketone)	78-93-3		WEL	200	600	300	899	EH40/2005
GB	methyl acetate	79-20-9		WEL	200	616	250	770	EH40/2005

Notation

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

Biological limit values

Country	Name of agent	Parameter	Notation	Identifier	Value	Material	Source
GB	xylene	methylhippuric acids	crea	BMGV	650 mmol/mol	urine	EH40/2005
GB	butanone	ethyl methyl ketone		BMGV	70 µmol/l	urine	EH40/2005

Notation
crea Creatinine

Relevant DNELs/DMELs/PNECs and other threshold levels

• 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
Xylene (isomers)	1330-20-7	DNEL	289 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Xylene (isomers)	1330-20-7	DNEL	289 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Xylene (isomers)	1330-20-7	DNEL	180 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Xylene (isomers)	1330-20-7	DNEL	77 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
acetone	67-64-1	DNEL	2.420 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
acetone	67-64-1	DNEL	2.420 mg/m³	human, inhalatory	worker (industry)	acute - local effects
acetone	67-64-1	DNEL	186 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
acetone	67-64-1	DNEL	1.210 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
ethyl acetate	141-78-6	DNEL	1.468 mg/m³	human, inhalatory	worker (industry)	acute - local effects
ethyl acetate	141-78-6	DNEL	1.468 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
ethyl acetate	141-78-6	DNEL	734 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
ethyl acetate	141-78-6	DNEL	63 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
ethyl acetate	141-78-6	DNEL	734 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Acetic acid methyl ester	79-20-9	DNEL	610 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Acetic acid methyl ester	79-20-9	DNEL	305 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
Acetic acid methyl ester	79-20-9	DNEL	88 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
ethyl alcohol	64-17-5	DNEL	1.900 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
ethyl alcohol	64-17-5	DNEL	343 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
ethyl alcohol	64-17-5	DNEL	950 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
2-Butanone	78-93-3	DNEL	1.161 mg/kg	human, dermal	worker (industry)	chronic - systemic effects

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
2-Butanone	78-93-3	DNEL	600 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
n-butyl acetate	123-86-4	DNEL	960 mg/m³	human, inhalatory	worker (industry)	acute - local effects
n-butyl acetate	123-86-4	DNEL	960 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
n-butyl acetate	123-86-4	DNEL	480 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
n-butyl acetate	123-86-4	DNEL	480 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Propan-2-ol	67-63-0	DNEL	888 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Propan-2-ol	67-63-0	DNEL	500 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
butyl alcohol (except tert-butyl alcohol)	71-36-3	DNEL	310 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
toluene	108-88-3	DNEL	384 mg/m³	human, inhalatory	worker (industry)	acute - local effects
toluene	108-88-3	DNEL	384 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
toluene	108-88-3	DNEL	192 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
toluene	108-88-3	DNEL	384 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
toluene	108-88-3	DNEL	192 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	260 mg/m³	human, inhalatory	worker (industry)	acute - local effects
methanol	67-56-1	DNEL	40 mg/kg	human, dermal	worker (industry)	acute - systemic effects
methanol	67-56-1	DNEL	260 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
methanol	67-56-1	DNEL	260 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
methanol	67-56-1	DNEL	40 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	260 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects

• relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Xylene (isomers)	1330-20-7	PNEC	0,327 mg/l	freshwater
Xylene (isomers)	1330-20-7	PNEC	0,327 mg/l	marine water
Xylene (isomers)	1330-20-7	PNEC	6,58 mg/l	sewage treatment plant (STP)
Xylene (isomers)	1330-20-7	PNEC	12,46 mg/kg	freshwater sediment
Xylene (isomers)	1330-20-7	PNEC	12,46 mg/kg	marine sediment
Xylene (isomers)	1330-20-7	PNEC	2,31 mg/kg	soil
acetone	67-64-1	PNEC	10,6 mg/l	freshwater
acetone	67-64-1	PNEC	1,06 mg/l	marine water
acetone	67-64-1	PNEC	100 mg/l	sewage treatment plant (STP)
acetone	67-64-1	PNEC	30,4 mg/kg	freshwater sediment
acetone	67-64-1	PNEC	3,04 mg/kg	marine sediment
acetone	67-64-1	PNEC	29,5 mg/kg	soil
ethyl acetate	141-78-6	PNEC	0,24 mg/l	freshwater
ethyl acetate	141-78-6	PNEC	0,024 mg/l	marine water
ethyl acetate	141-78-6	PNEC	650 mg/l	sewage treatment plant (STP)
ethyl acetate	141-78-6	PNEC	1,15 mg/kg	freshwater sediment
ethyl acetate	141-78-6	PNEC	0,115 mg/kg	marine sediment
ethyl acetate	141-78-6	PNEC	0,148 mg/kg	soil
ethyl acetate	141-78-6	PNEC	1,65 mg/l	water
Acetic acid methyl ester	79-20-9	PNEC	0,12 mg/l	freshwater
Acetic acid methyl ester	79-20-9	PNEC	0,012 mg/l	marine water
Acetic acid methyl ester	79-20-9	PNEC	600 mg/l	sewage treatment plant (STP)
Acetic acid methyl ester	79-20-9	PNEC	0,128 mg/kg	freshwater sediment
Acetic acid methyl ester	79-20-9	PNEC	0,013 mg/kg	marine sediment
Acetic acid methyl ester	79-20-9	PNEC	0,042 mg/kg	soil
ethyl alcohol	64-17-5	PNEC	0,79 mg/cm³	marine water
ethyl alcohol	64-17-5	PNEC	2,75 mg/cm³	air
ethyl alcohol	64-17-5	PNEC	3,6 mg/cm³	freshwater sediment
ethyl alcohol	64-17-5	PNEC	0,96 mg/cm³	freshwater
ethyl alcohol	64-17-5	PNEC	580 mg/cm³	sewage treatment plant (STP)
ethyl alcohol	64-17-5	PNEC	0,63 mg/cm³	soil
2-Butanone	78-93-3	PNEC	55,8 mg/cm³	marine water

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
2-Butanone	78-93-3	PNEC	55,8 mg/cm³	air
2-Butanone	78-93-3	PNEC	285 mg/cm³	freshwater sediment
2-Butanone	78-93-3	PNEC	55,8 mg/cm³	freshwater
2-Butanone	78-93-3	PNEC	709 mg/cm³	sewage treatment plant (STP)
2-Butanone	78-93-3	PNEC	22,5 mg/cm³	soil
n-butyl acetate	123-86-4	PNEC	0,18 mg/l	freshwater
n-butyl acetate	123-86-4	PNEC	0,018 mg/l	marine water
n-butyl acetate	123-86-4	PNEC	35,6 mg/l	sewage treatment plant (STP)
n-butyl acetate	123-86-4	PNEC	0,981 mg/kg	freshwater sediment
n-butyl acetate	123-86-4	PNEC	0,0981 mg/kg	marine sediment
n-butyl acetate	123-86-4	PNEC	0,0903 mg/kg	soil
n-butyl acetate	123-86-4	PNEC	0,36 mg/l	water
Propan-2-ol	67-63-0	PNEC	140,9 mg/l	freshwater
Propan-2-ol	67-63-0	PNEC	140,9 mg/l	marine water
Propan-2-ol	67-63-0	PNEC	2.251 mg/l	sewage treatment plant (STP)
Propan-2-ol	67-63-0	PNEC	552 mg/kg	freshwater sediment
Propan-2-ol	67-63-0	PNEC	552 mg/kg	marine sediment
Propan-2-ol	67-63-0	PNEC	160 mg/kg	water
Propan-2-ol	67-63-0	PNEC	28 mg/kg	soil
Propan-2-ol	67-63-0	PNEC	140,9 mg/l	water
butyl alcohol (except tert-butyl alcohol)	71-36-3	PNEC	0,082 mg/l	freshwater
butyl alcohol (except tert-butyl alcohol)	71-36-3	PNEC	0,0082 mg/l	marine water
butyl alcohol (except tert-butyl alcohol)	71-36-3	PNEC	2.476 mg/l	sewage treatment plant (STP)
butyl alcohol (except tert-butyl alcohol)	71-36-3	PNEC	0,178 mg/kg	freshwater sediment
butyl alcohol (except tert-butyl alcohol)	71-36-3	PNEC	0,0178 mg/kg	marine sediment
butyl alcohol (except tert-butyl alcohol)	71-36-3	PNEC	0,015 mg/kg	soil
butyl alcohol (except tert-butyl alcohol)	71-36-3	PNEC	2,25 mg/l	water
toluene	108-88-3	PNEC	0,68 mg/l	freshwater
toluene	108-88-3	PNEC	0,68 mg/l	marine water
toluene	108-88-3	PNEC	13,61 mg/l	sewage treatment plant (STP)

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
toluene	108-88-3	PNEC	16,39 mg/kg	freshwater sediment
toluene	108-88-3	PNEC	16,39 mg/kg	marine sediment
toluene	108-88-3	PNEC	2,89 mg/kg	soil
toluene	108-88-3	PNEC	0,68 mg/l	water
methanol	67-56-1	PNEC	20,8 mg/l	freshwater
methanol	67-56-1	PNEC	2,08 mg/l	marine water
methanol	67-56-1	PNEC	100 mg/l	sewage treatment plant (STP)
methanol	67-56-1	PNEC	77 mg/kg	freshwater sediment
methanol	67-56-1	PNEC	7,7 mg/kg	marine sediment
methanol	67-56-1	PNEC	3,18 mg/kg	soil
methanol	67-56-1	PNEC	1.540 mg/l	water

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.

• type of material

FKM (fluoro rubber)

• material thickness

0,4 mm.

• 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: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid (fluid)
Colour	colourless
Odour	like esters
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	6 - 8
Melting point/freezing point	<-25 °C
Initial boiling point and boiling range	50 - 180 °C
Flash point	<21 °C
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	
• lower explosion limit (LEL)	1,5 vol%
• upper explosion limit (UEL)	13 vol%
Explosion limits of dust clouds	not relevant
Vapour pressure	230 mbar
Density	0,85 - 0,89 $^{g}/_{cm^3}$
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
Solubility(ies)	
Water solubility	practically insoluble
Partition coefficient	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	400 °C
Decomposition temperature	no data available
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

9.2 Other information

Temperature class (EU, acc. to ATEX)	T2 (Maximum permissible surface temperature on the equipment: 300°C)

SECTION 10: Stability and reactivity

10.1 Reactivity
risk of ignition. Vapours can form explosive mixtures with air.

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, Nitric acid

10.4 Conditions to avoid
Keep away from heat. No smoking.

10.5 Incompatible materials
plastic and rubber

10.6 Hazardous decomposition products
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Shall not be classified as acutely toxic.

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Xylene (isomers)	1330-20-7	dermal	1.700 $^{mg}/_{kg}$
Xylene (isomers)	1330-20-7	inhalation: vapour	11 $^{mg}/_{l}$/4h
butyl alcohol (except tert-butyl alcohol)	71-36-3	oral	500 $^{mg}/_{kg}$
methanol	67-56-1	oral	100 $^{mg}/_{kg}$
methanol	67-56-1	dermal	300 $^{mg}/_{kg}$
methanol	67-56-1	inhalation: vapour	3 $^{mg}/_{l}$/4h

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye damage.

Respiratory or skin sensitisation
Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Reproductive toxicity:
Suspected of damaging the unborn child

• Specific target organ toxicity - single exposure
May cause respiratory irritation. May cause drowsiness or dizziness.

• Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed
diarrhoea, vomiting, aspiration hazard

• If in eyes
Causes serious eye damage, risk of blindness

• If inhaled
irritant effects, cough, breathing difficulties, pulmonary oedema

• If on skin
repeated exposure may cause skin dryness or cracking, causes skin irritation, risk of absorption via the skin

Other information
Other adverse effects: Drowsiness, Headache, Impairment of vision, Dizziness, Vertigo, Nausea, Dyspnoea, Unconsciousness, Liver and kidney damage, Symptoms can occur only after several hours

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Xylene (isomers)	1330-20-7	EC50	1,1 $^{mg}/_{l}$	daphnia magna	24 h
Xylene (isomers)	1330-20-7	LC50	2,6 $^{mg}/_{l}$	rainbow trout (Oncorhynchus mykiss)	96 h
acetone	67-64-1	LC50	8.120 $^{mg}/_{l}$	fish	96 h
ethyl acetate	141-78-6	LC50	230 $^{mg}/_{l}$	Pimephales promelas	96 h
ethyl acetate	141-78-6	EC50	220 $^{mg}/_{l}$	fish	96 h
Acetic acid methyl ester	79-20-9	EC50	1.027 $^{mg}/_{l}$	daphnia magna	48 h
Acetic acid methyl ester	79-20-9	LC50	250 $^{mg}/_{l}$	zebra fish (Danio rerio)	96 h

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Acetic acid methyl ester	79-20-9	ErC50	>120 mg/l	algae	72 h
ethyl alcohol	64-17-5	EC50	>9.000 mg/l	daphnia magna	48 h
ethyl alcohol	64-17-5	LC50	8.140 mg/l	orfe (Leuciscus idus)	96 h
2-Butanone	78-93-3	LC50	2.990 mg/l	Pimephales promelas	96 h
2-Butanone	78-93-3	EC50	308 mg/l	daphnia magna	48 h
2-Butanone	78-93-3	ErC50	1.972 mg/l	Pseudokirchneriella subcapitata	72 h
n-butyl acetate	123-86-4	LC50	18 mg/l	fish	96 h
n-butyl acetate	123-86-4	EC50	44 mg/l	aquatic invertebrates	48 h
n-butyl acetate	123-86-4	ErC50	674,7 mg/l	algae	72 h
Propan-2-ol	67-63-0	EC50	>13.000 mg/l	daphnia magna	48 h
Propan-2-ol	67-63-0	EC50	>1.000 mg/l	Scenedesmus quadricauda	72 h
Propan-2-ol	67-63-0	LC50	1.400 mg/l	bluegill (Lepomis macrochirus)	96 h
butyl alcohol (except tert-butyl alcohol)	71-36-3	LC50	1.376 mg/l	fish	96 h
butyl alcohol (except tert-butyl alcohol)	71-36-3	EC50	1.328 mg/l	aquatic invertebrates	48 h
butyl alcohol (except tert-butyl alcohol)	71-36-3	ErC50	225 mg/l	algae	96 h
toluene	108-88-3	LC50	5,5 mg/l	fish	96 h
methanol	67-56-1	LC50	15.400 mg/l	fish	96 h
methanol	67-56-1	EC50	12.700 mg/l	fish	96 h
methanol	67-56-1	ErC50	22.000 mg/l	algae	96 h

Aquatic toxicity (chronic)

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Xylene (isomers)	1330-20-7	ErC50	4,36 mg/l	algae	73 h
Xylene (isomers)	1330-20-7	EC50	2,2 mg/l	Pseudokirchneriella subcapitata	73 h
Xylene (isomers)	1330-20-7	EC50	>157 mg/l	microorganisms	3 h
acetone	67-64-1	LC50	2.100 mg/l	aquatic invertebrates	24 h
acetone	67-64-1	EC50	61,15 g/l	microorganisms	30 min

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
ethyl acetate	141-78-6	EC50	2.306 $^{mg}/_{l}$	aquatic invertebrates	24 h
Acetic acid methyl ester	79-20-9	EC50	6.100 $^{mg}/_{l}$	microorganisms	30 min
butyl alcohol (except tert-butyl alcohol)	71-36-3	EC50	18 $^{mg}/_{l}$	aquatic invertebrates	21 d
toluene	108-88-3	LC50	3,78 $^{mg}/_{l}$	aquatic invertebrates	2 d
toluene	108-88-3	EC50	3,23 $^{mg}/_{l}$	aquatic invertebrates	7 d

12.2 Process of degradability

The substance is readily biodegradable.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
acetone	67-64-1	biotic/abiotic	91 %	28 d
acetone	67-64-1	carbon dioxide generation	90,9 %	28 d
ethyl acetate	141-78-6	biotic/abiotic	100 %	28 d
ethyl acetate	141-78-6	oxygen depletion	62 %	5 d
Acetic acid methyl ester	79-20-9	biotic/abiotic	>70 %	19 d
Acetic acid methyl ester	79-20-9	oxygen depletion	1 %	0 d
ethyl alcohol	64-17-5	biotic/abiotic	94 %	d
2-Butanone	78-93-3	oxygen depletion	98 %	28 d
n-butyl acetate	123-86-4	biotic/abiotic	83 %	28 d
n-butyl acetate	123-86-4	oxygen depletion	80 %	5 d
Propan-2-ol	67-63-0	biotic/abiotic	95 %	21 d
Propan-2-ol	67-63-0	oxygen depletion	53 %	5 d
butyl alcohol (except tert-butyl alcohol)	71-36-3	biotic/abiotic	98 %	28 d
methanol	67-56-1	biotic/abiotic	99 %	30 d
methanol	67-56-1	oxygen depletion	76 %	5 d

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
Xylene (isomers)	1330-20-7	<12.2 []	3,16
acetone	67-64-1		-0,24
ethyl acetate	141-78-6	30.0 []	0,68
Acetic acid methyl ester	79-20-9		0,18
ethyl alcohol	64-17-5		-0,31
2-Butanone	78-93-3		0,29
n-butyl acetate	123-86-4		2,3
Propan-2-ol	67-63-0		0,05
butyl alcohol (except tert-butyl alcohol)	71-36-3	2.7 []	1
toluene	108-88-3	90.0 []	2,73
methanol	67-56-1		-0,77

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Hazardous to water.

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.

Waste treatment of containers/packagings

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

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.

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	**1993**
14.2	UN proper shipping name	**FLAMMABLE LIQUID, N.O.S.**
	Hazardous ingredients	Acetone, Ethyl acetate
14.3	Transport hazard class(es)	
	Class	3 (flammable liquids)
14.4	Packing group	II (substance presenting medium danger)
14.5	Environmental hazards	none (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 Transport in bulk according to Annex II of MARPOL and the IBC Code
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)

UN number	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S.
Particulars in the transport document	UN1993, FLAMMABLE LIQUID, N.O.S., (contains: acetone, ethyl acetate), 3, II, (D/E), special provision 640D
Class	3
Classification code	F1
Packing group	II
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

• International Maritime Dangerous Goods Code (IMDG)

UN number	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S.
Particulars in the shipper's declaration	UN1993, FLAMMABLE LIQUID, N.O.S., (contains: acetone, ethyl acetate), 3, II, <21°C c.c.
Class	3
Packing group	II
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

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)

• Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)
None of the ingredients are listed.

• Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)
None of the ingredients are listed.

• Regulation 850/2004/EC on persistent organic pollutants (POP)
None of the ingredients are listed.

• List of substances subject to authorisation (REACH, Annex XIV)
None of the ingredients are listed.

• 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

• Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)

VOC content 100 %

• Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content 100 %

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Comission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
2006/15/EC	Comission 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
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 européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Asp. Tox.	aspiration hazard
ATE	Acute Toxicity Estimate
BCF	BioConcentration Factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
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

Abbr.	Descriptions of used abbreviations
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	indicative occupational exposure limit value
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant)
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts per million
RCP	reciprocal calculation procedure
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
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative
WEL	workplace exposure limit

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

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

Code	Text
H225	highly flammable liquid and vapour
H226	flammable liquid and vapour
H301	toxic if swallowed
H302	harmful if swallowed
H304	may be fatal if swallowed and enters airways
H311	toxic in contact with skin
H312	harmful in contact with skin

Code	Text
H315	causes skin irritation
H318	causes serious eye damage
H319	causes serious eye irritation
H331	toxic if inhaled
H332	harmful if inhaled
H335	may cause respiratory irritation
H336	may cause drowsiness or dizziness
H361d	suspected of damaging the unborn child
H370	causes damage to organs
H373	may cause damage to organs through prolonged or repeated exposure

Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.