

according to Regulation (EC) No 1907/2006

BMW Kondensat I

Revision date: 01.06.2022

Product code: 28271

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

1.1. Product identifier

BMW Kondensat I

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	Fa. Bernd Kraft GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone: e-mail:	0203/5194-0 info@berndkraft.de	Telefax: 0203/5194-290
Contact person: e-mail: Internet: Responsible Department:	Abteilung Produktsicherheit produktsicherheit@berndkraft.de www.berndkraft.de Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
<u>1.4. Emergency telephone</u> number:	Exposure, or Accident Call CHEMTR	ous Goods] Incidents Spill, Leak, Fire, REC Day or Night Within USA and Canada: Canada: +1 703-741-5970 (collect calls

Further Information

This product is a mixture. REACH Registration Number see section 3.

accepted)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 Skin Sens. 1; H317 Carc. 1B; H350 Repr. 2; H361d STOT SE 3; H336 STOT RE 2; H373 Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling toluene formaldehyde 2,2,4-trimethylpentane naphthalene

Signal word: Danger



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Pictograms:



Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H361d	Suspected of damaging the unborn child.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No
	smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with
	water or shower.
P331	Do NOT induce vomiting.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international
	regulations.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures



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Hazardous components

CAS No	Chemical name			Quantity			
	EC No	Index No	REACH No				
	Classification (Regulation (EC) No 1272/2008)						
108-88-3	toluene			20 - < 25 %			
	203-625-9	601-021-00-3	01-2119471310-51				
	Flam. Liq. 2, Repr. 2, Ski H373 H304	n Irrit. 2, STOT SE 3, STOT RE 2, /	Asp. Tox. 1; H225 H361d H315 H336				
540-84-1	2,2,4-trimethylpentane			10 - < 15 %			
	208-759-1	601-009-00-8	01-2119457965-22				
	Flam. Liq. 2, Skin Irrit. 2, H315 H336 H304 H400 I						
25167-70-8	2,4,4-trimethylpentene			5 - < 10 %			
	246-690-9	601-087-00-3					
	Flam. Liq. 2, STOT SE 3						
64-17-5	ethanol	1 - < 5 %					
	200-578-6	603-002-00-5	01-2119457610-43				
	Flam. Liq. 2, Eye Irrit. 2;						
91-20-3	naphthalene			1 - < 5 %			
	202-049-5	601-052-00-2					
	Flam. Sol. 1, Carc. 2, Ac H410						
67-56-1	methanol			1 - < 5 %			
	200-659-6	603-001-00-X	01-2119433307-44				
	Flam. Liq. 2, Acute Tox.						

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE CAS No Chemical name EC No Quantity Specific Conc. Limits, M-factors and ATE 108-88-3 203-625-9 20 - < 25 % toluene inhalation: LC50 = 28,1 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = 5580 mg/kg 540-84-1 208-759-1 2,2,4-trimethylpentane 10 - < 15 % inhalation: LC50 = > 33,52 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg 25167-70-8 246-690-9 2,4,4-trimethylpentene 5 - < 10 % dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg 64-17-5 200-578-6 ethanol 1 - < 5 % inhalation: LC50 = 124,7 mg/l (vapours); oral: LD50 = 10470 mg/kg Eye Irrit. 2; H319: >= 50 -100 91-20-3 202-049-5 1 - < 5 % naphthalene inhalation: LC50 = > 77,7 mg/l (vapours); dermal: LD50 = > 16000 mg/kg; oral: LD50 = 710 mg/kg 67-56-1 200-659-6 methanol 1 - < 5 % inhalation: LC50 = 128,2 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: LD50 = 6000 mg/kg STOT SE 1; H370: >= 10 - 100 STOT SE 2; H371: >= 3 - < 10

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).



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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

After contact with skin

Wash immediately with: Water Take off immediately all contaminated clothing and wash it before reuse. Call a physician immediately.

After contact with eyes

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.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water. Observe risk of aspiration if vomiting occurs. Call a physician immediately.

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

No data available

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Carbon dioxide (CO2), Foam, Extinguishing powder.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

- Combustible liquids
 - Hazardous combustion products

Vapours are heavier than air, spread along floors and form explosive mixtures with air. Heating causes rise in pressure with risk of bursting.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes. Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Move undamaged containers from immediate hazard area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures



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General advice

Keep away from sources of ignition - No smoking.

This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Take action to prevent static discharges.

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Remove persons to safety. Emergency procedures Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

Danger of explosion

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

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

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation. Do not breathe dust/fume/gas/mist/vapours/spray. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use. Handle and open container with care. When using do not eat, drink, smoke, sniff. Keep container tightly closed. Use personal protection equipment. Use extractor hood (laboratory). Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.



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Further information on handling

Take off immediately all contaminated clothing and wash it before reuse. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used. Store in a place accessible by authorized persons only.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Further information on storage conditions

Keep cool. Protect from sunlight.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
64-17-5	Ethyl alcohol	1000	-		STEL (15 min)	
67-56-1	Methyl alcohol	200	260		TWA (8 h)	
91-20-3	Naphthalene	10	50		TWA (8 h)	
108-88-3	Toluene	50	192		TWA (8 h)	
		100	384		STEL (15 min)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
108-88-3	Toluene	Toluene	0.02 mg/L		Prior to last shift of workweek
67-56-1	Methanol	Methanol	15 mg/L	Urine	End of shift



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DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
108-88-3	toluene			
Worker DNEL	, long-term	inhalation	systemic	192 mg/m ³
Worker DNEL	, acute	inhalation	systemic	384 mg/m ³
Worker DNEL	, long-term	inhalation	local	192 mg/m ³
Worker DNEL	, acute	inhalation	local	384 mg/m ³
Worker DNEL	, long-term	dermal	systemic	384 mg/kg bw/day
Consumer DN	EL, long-term	inhalation	systemic	56,5 mg/m³
Consumer DN	EL, acute	inhalation	systemic	226 mg/m ³
Consumer DN	EL, long-term	inhalation	local	56,5 mg/m ³
Consumer DN	EL, acute	inhalation	local	226 mg/m ³
Consumer DN	EL, long-term	dermal	systemic	226 mg/kg bw/day
Consumer DN	EL, long-term	oral	systemic	8,13 mg/kg bw/day
540-84-1	2,2,4-trimethylpentane			
Worker DNEL	, long-term	inhalation	systemic	2035 mg/m ³
Worker DNEL	, long-term	dermal	systemic	773 mg/kg bw/day
Consumer DN	EL, long-term	inhalation	systemic	608 mg/m ³
Consumer DN	EL, long-term	dermal	systemic	699 mg/kg bw/day
Consumer DN	EL, long-term	oral	systemic	699 mg/kg bw/day
25167-70-8	2,4,4-trimethylpentene	•		
Worker DNEL	, long-term	inhalation	systemic	14,7 mg/m ³
Worker DNEL	, long-term	dermal	systemic	2,1 mg/kg bw/day
Consumer DN	EL, long-term	inhalation	systemic	4,4 mg/m ³
Consumer DN	EL, long-term	dermal	systemic	1,2 mg/kg bw/day
Consumer DN	EL, long-term	oral	systemic	2,5 mg/kg bw/day
64-17-5	ethanol			
Worker DNEL	, long-term	inhalation	systemic	950 mg/m ³
Worker DNEL	, long-term	dermal	systemic	343 mg/kg bw/day
Consumer DN	EL, long-term	inhalation	systemic	114 mg/m ³
Consumer DN	EL, long-term	dermal	systemic	206 mg/kg bw/day
Consumer DN	EL, long-term	oral	systemic	87 mg/kg bw/day
91-20-3	naphthalene			
Worker DNEL		inhalation	systemic	25 mg/m³
Worker DNEL	, long-term	inhalation	local	25 mg/m ³
Worker DNEL	, long-term	dermal	systemic	3,57 mg/kg bw/day
67-56-1	methanol			
Consumer DN	EL, acute	inhalation	systemic	50 mg/m³
Worker DNEL	, long-term	inhalation	systemic	260 mg/m ³
Worker DNEL	, acute	inhalation	systemic	260 mg/m ³
Worker DNEL	, long-term	inhalation	local	260 mg/m ³



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Worker DNEL, acute	inhalation	local	260 mg/m³
Worker DNEL, long-term	dermal	systemic	40 mg/kg bw/day
Worker DNEL, acute	dermal	systemic	40 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	50 mg/m³
Consumer DNEL, long-term	inhalation	local	50 mg/m³
Consumer DNEL, acute	inhalation	local	50 mg/m³
Consumer DNEL, long-term	dermal	systemic	8 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	8 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	8 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	8 mg/kg bw/day



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PNEC values

CAS No	Substance	
Environmenta	compartment	Value
108-88-3	toluene	
Freshwater		0,68 mg/l
Freshwater (in	termittent releases)	0,68 mg/l
Marine water		0,68 mg/l
Freshwater se	diment	16,39 mg/kg
Marine sedime	ent	16,39 mg/kg
Micro-organis	ns in sewage treatment plants (STP)	13,61 mg/l
Soil		2,89 mg/kg
25167-70-8	2,4,4-trimethylpentene	
Freshwater		0,015 mg/l
Freshwater (in	termittent releases)	0,015 mg/l
Marine water		0,015 mg/l
Freshwater se	diment	0,9 mg/kg
Marine sedime	ent	0,9 mg/kg
Micro-organisi	ns in sewage treatment plants (STP)	0,233 mg/l
Soil		0,43 mg/kg
64-17-5	ethanol	
Freshwater		0,96 mg/l
Freshwater (in	2,75 mg/l	
Marine water	0,79 mg/l	
Freshwater se	diment	3,6 mg/kg
Marine sedime	ent	2,9 mg/kg
Secondary po	isoning	380 mg/kg
Micro-organis	ns in sewage treatment plants (STP)	580 mg/l
Soil		0,63 mg/kg
91-20-3	naphthalene	
Freshwater		0,0024 mg/l
Freshwater (in	termittent releases)	0,02 mg/l
Marine water		0,0024 mg/l
Freshwater se	diment	0,0672 mg/kg
Marine sedime	ent	0,0672 mg/kg
Micro-organisi	ns in sewage treatment plants (STP)	2,9 mg/l
Soil		0,0533 mg/kg
67-56-1	methanol	
Freshwater		20,8 mg/l
Freshwater (in	termittent releases)	1540 mg/l
Marine water		2,08 mg/l
Freshwater se	diment	77 mg/kg
Marine sedime	ent	7,7 mg/kg
Micro-organis	ns in sewage treatment plants (STP)	100 mg/l



100 mg/kg

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8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles Face protection umbrella

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact: No data available

By short-term hand contact Trade name/designation: KCL 890 Vitoject® Suitable material: FKM (fluoro rubber) 0,7 mm Wearing time with occasional contact (splashes): > 120 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Take off immediately all contaminated clothing and wash it before reuse. Wear fire resistant or flame retardant clothing. Wash hands and face before breaks and after work and take a shower if necessary.

Draw up and observe skin protection programme.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Environmental exposure controls

Do not allow to enter into surface water or drains. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Danger of explosion

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	clear
Odour:	characteristic
Odour threshold:	No data available

Changes in the physical state



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Melting point/freezing point:	No data available	
Boiling point or initial boiling point and	>35 °C	
boiling range:		
Sublimation point:	No data available	
Softening point:	No data available	
Pour point:	No data available No data available	
Electric estati		
Flash point:	<21 °C	
Flammability	not applicable	
Solid/liquid: Gas:	not applicable not applicable	
-	not applicable	
Explosive properties Vapours are heavier than air, spread along f	loors and form explosive mixtures with air.	
Lower explosion limits:	No data available	
Upper explosion limits:	No data available	
Auto-ignition temperature:	No data available	
Self-ignition temperature		
Solid:	not applicable	
Gas:	not applicable	
Decomposition temperature:	not determined	
pH-Value:	No data available	
Viscosity / dynamic:	No data available	
Viscosity / kinematic:	No data available	
Flow time:	No data available	
Solubility in other solvents		
No data available		
Dissolution rate:	No data available	
Partition coefficient n-octanol/water:	No data available	
Dispersion stability:	No data available	
Vapour pressure:	No data available	
Vapour pressure:	No data available	
Density: Bulk density:	0,84498 g/cm³ No data available	
Relative vapour density:	not determined	
Particle characteristics:	No data available	
9.2. Other information		
Information with regard to physical hazard cla Sustaining combustion:	Isses Sustaining combustion	
Oxidizing properties Not oxidising.		
Other safety characteristics		
Solvent separation test:	No data available	
Solvent content:	No data available	
Solid content:	No data available	
Evaporation rate:	No data available	
Further Information		
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No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapours may form explosive mixtures with air.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Oxidising agent

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

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



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CAS No	Chemical name							
	Exposure route	Dose		Species	Source	Method		
108-88-3	toluene	toluene						
	oral	LD50 mg/kg	5580	Rat	Toxicology 4, 5-15 (1975)	EU Method B.1		
	dermal	LD50 mg/kg	> 5000	Rabbit	American Industrial Hygiene Association	Study investigated mortality in groups o		
	inhalation (4 h) vapour	LC50	28,1 mg/l	Rat	Study report (1980)	OECD Guideline 403		
540-84-1	2,2,4-trimethylpentane	<u> </u>		-				
	oral	LD50 mg/kg	> 5000	Rat	Study report (1982)	OECD Guideline 401		
	dermal	LD50 mg/kg	> 2000	Rabbit	Study report (1982)	OECD Guideline 402		
	inhalation (4 h) vapour	LC50 mg/l	> 33,52	Rat	Study report (1982)	OECD Guideline 403		
25167-70-8	2,4,4-trimethylpentene							
	oral	LD50 mg/kg	> 2000	Rat	Study report (1996)	OECD Guideline 401		
	dermal	LD50 mg/kg	> 2000	Rat	Study report (1996)	OECD Guideline 402		
64-17-5	ethanol							
	oral	LD50 mg/kg	10470	Rat	Study report (1976)	OECD Guideline 401		
	inhalation (4 h) vapour	LC50 mg/l	124,7	Rat	Study report (1980)	OECD Guideline 403		
91-20-3	naphthalene							
	oral	LD50 mg/kg	710	Mouse	FUND. APPL. TOXICOL 4: 406-419 (1984) (1	OECD Guideline 401		
	dermal	LD50 mg/kg	> 16000	Rat	Study report (1980)	OECD Guideline 402		
	inhalation (4 h) vapour	LC50 mg/l	> 77,7	Rat	Study report (1985)	other: EPA TSCA		
67-56-1	methanol							
	oral	LD50 mg/kg	6000	Monkey	Amer J Ophthalmol 40: 76-83 (cited in DG	Determination of the acute toxicity of t		
	dermal	ATE mg/kg	300					
	inhalation (4 h) vapour	LC50 mg/l	128,2	Rat	Study report (1980)	Study performed according to internal co		
	inhalation dust/mist	ATE	0,5 mg/l					

Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction.

Carcinogenic/mutagenic/toxic effects for reproduction



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May cause cancer.

Suspected of damaging the unborn child. (toluene) Germ cell mutagenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness. (toluene)

STOT-repeated exposure

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

Aspiration hazard

May be fatal if swallowed and enters airways.

Information on likely routes of exposure

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

Other information

There are no data available on the mixture itself.

Further information

There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



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CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
108-88-3	toluene						
	Acute fish toxicity	LC50	5,5 mg/l	96 h	Oncorhynchus kisutch	Transactions A. Fish. Soc. 110, 430-436.	Fry were exposed to toluene in a flow th
	Acute algae toxicity	ErC50 mg/l	> 433	96 h	Pseudokirchneriella subcapitata	REACh Registration Dossier	Method: other
	Acute crustacea toxicity	EC50 mg/l	11,5	48 h	Daphnia magna	REACh Registration Dossier	Method: other
	Fish toxicity	NOEC mg/l	1,39	40 d	Oncorhynchus kisutch	Transactions A. Fish. Soc. 110, 430-436.	Fry were exposed to toluene in a flow th
	Algae toxicity	NOEC mg/l	> 400	7 d	Scenedesmus quadricauda	REACh Registration Dossier	Method: other
	Crustacea toxicity	NOEC mg/l	0,74	7 d	Ceriodaphnia dubia	Ecotoxicol. Environ. Saf. 39, 136-146. (other: US EPA 600/4-91-003
540-84-1	2,2,4-trimethylpentane						
	Acute fish toxicity	LC50 mg/l	0,11	96 h	Oncorhynchus mykiss	SIDS Initial Assessment Report For SIAM	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	2,943	72 h	Pseudokirchneriella subcapitata	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
	Acute crustacea toxicity	EC50	0,4 mg/l	48 h	Daphnia magna	Publication (1986)	other: As described in: The evaluation o
	Fish toxicity	NOEC mg/l	0,82	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC	1 mg/l	21 d	Daphnia magna	SIDS Initial Assessment Report For SIAM	OECD Guideline 211
25167-70-8	2,4,4-trimethylpentene						
	Acute algae toxicity	ErC50 mg/l	0,73	72 h	Pseudokirchneriella subcapitata	Study report (1996)	OECD Guideline 201
	Crustacea toxicity	NOEC mg/l	0,16	21 d	Daphnia magna	Study report (2009)	OECD Guideline 211
64-17-5	ethanol					-	-
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination	other: EPA-660/3-75-00 9, 1975
	Acute algae toxicity	ErC50 22000 mg/	ca. I	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 10000	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11



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	Algae toxicity	NOEC mg/l	5400	5 d	Skeletonema costatum	Environ Toxicol Chem 8(5):451-455. (1989	Study to determine the sensitivity of a
	Crustacea toxicity	NOEC	2 mg/l	10 d	Ceriodaphnia dubia	Arch Environ Contam Toxicol 20(2):211-21	Follows the basic methodology for the th
91-20-3	naphthalene						
	Acute fish toxicity	LC50	1,6 mg/l	96 h	Oncorhynchus mykiss	Arch. Environm. Contam. Toxicol. 11, 487	OECD Guideline 203
	Acute algae toxicity	ErC50 ca. 0,5 mg/l	ca. 0,4 -	72 h	Skeletonema costatum	Mar Environ Res 11, 183-200 (1984)	Aquatic toxicity of water soluble fracti
	Acute crustacea toxicity	EC50 mg/l	2,16	48 h	Daphnia magna	Transactions of the American Fisheries S	OECD Guideline 202
	Fish toxicity	NOEC mg/l	0,37	40 d	Oncorhynchus kisutch	Trans. Am. Fish. Soc. 110:430-436, 1981	Coho salmon fry were exposed for 40 days
	Crustacea toxicity	NOEC mg/l	0,59	125 d	Daphnia pulex	Can. J . Fish. Aquat. Sci. 39: 830 - 834	During chronic studies in closed static
67-56-1	67-56-1 methanol						
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination	other: EPA-660/3-75-00 9, 1975
	Acute algae toxicity	ErC50 22000 mg/l	ca.	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 10000	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11
	Fish toxicity	NOEC mg/l	446,7	28 d	Pimephales promelas	SAR and QSAR in Environmental Research,	Calculation performed with ECOSAR
	Crustacea toxicity	NOEC	208 mg/l	21 d	Daphnia magna	OECD QSAR Toolbox Report (2013)	Toxicity of the target chemical is predi

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
108-88-3	toluene	2,73
540-84-1	2,2,4-trimethylpentane	4,08
25167-70-8	2,4,4-trimethylpentene	4,9 - 5
64-17-5	ethanol	-0,77
91-20-3	naphthalene	3,4
67-56-1	methanol	-0,77



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BCF

CAS No	Chemical name	BCF	Species	Source
108-88-3	toluene	90	Leuciscus idus melanotus	Chemosphere 14 (10).
540-84-1	2,2,4-trimethylpentane	231	calculated	Other company data (
25167-70-8	2,4,4-trimethylpentene	925	no data	QSAR calculation (20
64-17-5	ethanol	1	Cyprinus carpio	Comparative Biochemi
91-20-3	naphthalene	36,5 - 168	Cyprinus carpio	http://www.safe.nite
67-56-1	methanol	1	Cyprinus carpio	Comparative Biochemi

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. There are no data available on the mixture itself.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Do not allow to enter into surface water or drains.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Send to a physico-chemical treatment facility under observation of official regulations. Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport	(ADR/RID)
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14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (toluene, 2,2,4-trimethylpentane)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601 640D
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E
Inland waterways transport (ADN)	
14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (toluene, 2,2,4-trimethylpentane)



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14.3. Transport hazard class(es):	3				
14.4. Packing group:	11				
Hazard label:	3				
Classification code:	5 F1				
Special Provisions:	274 601 640D				
Limited quantity:	1L				
Excepted quantity:	E2				
Marine transport (IMDG)					
14.1. UN number or ID number:	UN 1993				
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (toluene, 2,2,4-trimethylpentane)				
14.3. Transport hazard class(es):					
14.4. Packing group:	3 II				
Hazard label:	3				
Special Provisions:	274				
Limited quantity:	1L				
Excepted quantity:	E2				
EmS:	F-E, S-E				
Air transport (ICAO-TI/IATA-DGR) 14.1. UN number or ID number:	UN 1993				
	FLAMMABLE LIQUID, N.O.S. (toluene, 2,2,4-trimethylpentane)				
14.2. UN proper shipping name:					
14.3. Transport hazard class(es):	3				
<u>14.4. Packing group:</u> Hazard label:	II 3				
Special Provisions:	3 A3				
Limited quantity Passenger:	1L				
Passenger LQ:	Y341				
Excepted quantity:	E2				
IATA-packing instructions - Passenger:	353				
IATA-max. quantity - Passenger:	5 L				
IATA-packing instructions - Cargo:	364				
IATA-max. quantity - Cargo:	60 L				
14.5. Environmental hazards					
ENVIRONMENTALLY HAZARDOUS:	Yes				
Danger releasing substance:	2,2,4-trimethylpentane				
14.6. Special precautions for user					
Warning: Combustible liquid.					
14.7. Maritime transport in bulk according t	o imo instruments				
not applicable					
SECTION 15: Regulatory information					
15.1. Safety, health and environmental regu	Ilations/legislation specific for the substance or mixture				
EU regulatory information					
. ,	Restrictions on use (REACH, annex XVII):				
Entry 3, Entry 40, Entry 48, Entry 69, I	Enuy 75				
National regulatory information					
Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juv				
	work protection guideline' (94/33/EC). Observe employment restriction	ns			
	under the Maternity Protection Directive (92/85/EEC) for expectant of				
	nursing mothers.				
Water hazard class (D):	2 - obviously hazardous to water				



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Skin resorption/Sensitization:

Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service LC50: Lethal concentration, 50% LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

C, C	levant in and Lon Stat	
	H225	Highly flammable liquid and vapour.
	H228	Flammable solid.
	H301	Toxic if swallowed.
	H302	Harmful if swallowed.
	H304	May be fatal if swallowed and enters airways.
	H311	Toxic in contact with skin.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H331	Toxic if inhaled.
	H336	May cause drowsiness or dizziness.
	H350	May cause cancer.
	H351	Suspected of causing cancer.
	H361d	Suspected of damaging the unborn child.
	H370	Causes damage to organs.
	H373	May cause 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.

Further Information

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.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)