

Prüfmedium 1 (organisch, kraftstoffhaltig) nach PPV 4053

Revision date: 07.06.2022

Product code: 31778

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

1.1. Product identifier

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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:	0203/5194-0	Telefax: 0203/5194-290
e-mail:	info@berndkraft.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
e-mail:	produktsicherheit@berndkraft.de	
Internet:	www.berndkraft.de	
Responsible Department:	Abteilung Produktsicherheit	

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

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

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

Muta. 2; H341

Carc. 1B; H350

Carc. 2; H351

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

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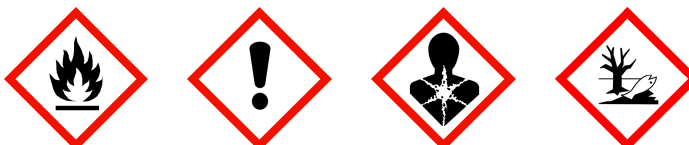
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Hazard components for labelling

toluene
2,2,4-trimethylpentane
formaldehyde
naphthalene

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.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P331	Do NOT induce vomiting.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

Endocrine disrupting properties: phenol, dodecyl-, branched.
No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

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, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H225 H361d H315 H336 H373 H304			
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, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H225 H315 H336 H304 H400 H410			
25167-70-8	2,4,4-trimethylpentene			5 - < 10 %
	246-690-9	601-087-00-3		
	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1; H225 H336 H304			
64-17-5	ethanol			1 - < 5 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
67-56-1	methanol			1 - < 5 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			
50-00-0	formaldehyde			1 - < 5 %
	200-001-8	605-001-00-5	01-2119488953-20	
	Carc. 1B, Muta. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B, Skin Sens. 1; H350 H341 H331 H311 H301 H314 H317			
91-20-3	naphthalene			1 - < 5 %
	202-049-5	601-052-00-2		
	Flam. Sol. 1, Carc. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1; H228 H351 H302 H400 H410			
121158-58-5	phenol, dodecyl-, branched			< 0.1 %
	310-154-3	604-092-00-9		
	Repr. 1B, Skin Corr. 1C, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H360F H314 H318 H400 H410			

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
108-88-3	203-625-9	toluene	20 - < 25 %
		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	
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	
50-00-0	200-001-8	formaldehyde	1 - < 5 %
		inhalation: LC50 = < 463 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: LD50 = 460 mg/kg Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 5 - < 25 Eye Irrit. 2; H319: >= 5 - < 25 Skin Sens. 1; H317: >= 0,2 - 100 STOT SE 3; H335: >= 5 - 100	
91-20-3	202-049-5	naphthalene	1 - < 5 %
		inhalation: LC50 = > 77,7 mg/l (vapours); dermal: LD50 = > 16000 mg/kg; oral: LD50 = 710 mg/kg	
121158-58-5	310-154-3	phenol, dodecyl-, branched	< 0.1 %
		M acute; H400: M=10 M chron.; H410: M=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).

SECTION 4: First aid measures

4.1. Description of first aid measures

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.

After ingestion

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

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

Dyspnoea
Headache
May cause drowsiness or dizziness.
Irritant
Allergic reactions
Repeated exposure may cause skin dryness or cracking.
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

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible liquids
Hazardous combustion products
In case of fire may be liberated: Carbon dioxide (CO₂) Carbon monoxide
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

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

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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

- Take action to prevent static discharges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on general occupational hygiene

- Keep away from food, drink and animal feedingstuffs.

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

- Store in a place accessible by authorized persons only.
- 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

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
64-17-5	Ethyl alcohol	1000	-		STEL (15 min)	
50-00-0	Formaldehyde	0.3	0.37		TWA (8 h)	
		0.6	0.738		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	Blood	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	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 DNEL, long-term		inhalation	systemic	56,5 mg/m ³
Consumer DNEL, acute		inhalation	systemic	226 mg/m ³
Consumer DNEL, long-term		inhalation	local	56,5 mg/m ³
Consumer DNEL, acute		inhalation	local	226 mg/m ³
Consumer DNEL, long-term		dermal	systemic	226 mg/kg bw/day
Consumer DNEL, 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 DNEL, long-term		inhalation	systemic	608 mg/m ³
Consumer DNEL, long-term		dermal	systemic	699 mg/kg bw/day
Consumer DNEL, 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 DNEL, long-term		inhalation	systemic	4,4 mg/m ³
Consumer DNEL, long-term		dermal	systemic	1,2 mg/kg bw/day
Consumer DNEL, 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 DNEL, long-term		inhalation	systemic	114 mg/m ³
Consumer DNEL, long-term		dermal	systemic	206 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	87 mg/kg bw/day
67-56-1	methanol			
Consumer DNEL, acute		inhalation	systemic	50 mg/m ³
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
Worker DNEL, acute		inhalation	local	260 mg/m ³
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/m ³

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Consumer DNEL, long-term	inhalation	local	50 mg/m ³
Consumer DNEL, acute	inhalation	local	50 mg/m ³
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
50-00-0	formaldehyde		
Worker DNEL, long-term	inhalation	systemic	9 mg/m ³
Worker DNEL, long-term	inhalation	local	0,375 mg/m ³
Worker DNEL, long-term	dermal	systemic	240 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	3,2 mg/m ³
Consumer DNEL, long-term	inhalation	local	0,1 mg/m ³
Consumer DNEL, long-term	dermal	systemic	102 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	4,1 mg/kg bw/day
Worker DNEL, acute	inhalation	local	0,75 mg/m ³
91-20-3	naphthalene		
Worker DNEL, long-term	inhalation	systemic	25 mg/m ³
Worker DNEL, long-term	inhalation	local	25 mg/m ³
Worker DNEL, long-term	dermal	systemic	3,57 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
Environmental compartment		Value
108-88-3	toluene	
Freshwater		0,68 mg/l
Freshwater (intermittent releases)		0,68 mg/l
Marine water		0,68 mg/l
Freshwater sediment		16,39 mg/kg
Marine sediment		16,39 mg/kg
Micro-organisms 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 (intermittent releases)		0,015 mg/l
Marine water		0,015 mg/l
Freshwater sediment		0,9 mg/kg
Marine sediment		0,9 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,233 mg/l
Soil		0,43 mg/kg
64-17-5	ethanol	
Freshwater		0,96 mg/l
Freshwater (intermittent releases)		2,75 mg/l
Marine water		0,79 mg/l
Freshwater sediment		3,6 mg/kg
Marine sediment		2,9 mg/kg
Secondary poisoning		380 mg/kg
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/kg
67-56-1	methanol	
Freshwater		20,8 mg/l
Freshwater (intermittent releases)		1540 mg/l
Marine water		2,08 mg/l
Freshwater sediment		77 mg/kg
Marine sediment		7,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		100 mg/kg
50-00-0	formaldehyde	
Freshwater		0,44 mg/l
Freshwater (intermittent releases)		4,44 mg/l
Marine water		0,44 mg/l
Freshwater sediment		2,3 mg/kg
Marine sediment		2,3 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,19 mg/l

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Soil	0,2 mg/kg
91-20-3	naphthalene
Freshwater	0,0024 mg/l
Freshwater (intermittent releases)	0,02 mg/l
Marine water	0,0024 mg/l
Freshwater sediment	0,0672 mg/kg
Marine sediment	0,0672 mg/kg
Micro-organisms in sewage treatment plants (STP)	2,9 mg/l
Soil	0,0533 mg/kg

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. 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.

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

Changes in the physical state

Melting point/freezing point: No data available
 Boiling point or initial boiling point and boiling range: >35 °C
 Sublimation point: No data available

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Softening point: No data available
 Pour point: No data available
 : No data available
 Flash point: <21 °C

Flammability

Solid/liquid: No data available
 Gas: No data available

Explosive properties

Vapours are heavier than air, spread along floors 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: No data available
 Gas: No data available

Decomposition temperature: No data available

pH-Value: No data available

Viscosity / dynamic: No data available

Viscosity / kinematic: No data available

Flow time: No data available

Water solubility: No data available

Solubility in other solvents

No data available

Partition coefficient n-octanol/water: No data available

Vapour pressure: No data available

Vapour pressure: No data available

Density: ~0,84 g/cm³

Bulk density: No data available

Relative vapour density: No data available

9.2. Other information

Information with regard to physical hazard classes

Oxidizing properties
 No data available

Other safety characteristics

Solvent separation test: No data available

Solid content: No data available

Evaporation rate: No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapours may form explosive mixtures with air.

10.2. Chemical stability

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

10.6. Hazardous decomposition products

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

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

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				
	oral	LD50 5580 mg/kg	Rat	Toxicology 4, 5-15 (1975)	EU Method B.1
	dermal	LD50 > 5000 mg/kg	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				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
	inhalation (4 h) vapour	LC50 > 33,52 mg/l	Rat	Study report (1982)	OECD Guideline 403
25167-70-8	2,4,4-trimethylpentene				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1996)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1996)	OECD Guideline 402
64-17-5	ethanol				
	oral	LD50 10470 mg/kg	Rat	Study report (1976)	OECD Guideline 401
	inhalation (4 h) vapour	LC50 124,7 mg/l	Rat	Study report (1980)	OECD Guideline 403
67-56-1	methanol				
	oral	LD50 6000 mg/kg	Monkey	Amer J Ophthalmol 40: 76-83 (cited in DG)	Determination of the acute toxicity of t
	dermal	ATE 300 mg/kg			
	inhalation (4 h) vapour	LC50 128,2 mg/l	Rat	Study report (1980)	Study performed according to internal co
	inhalation dust/mist	ATE 0,5 mg/l			
50-00-0	formaldehyde				
	oral	LD50 460 mg/kg	Rat	Kefo J Med 24: 19-37 (1975)	OECD Guideline 401
	dermal	ATE 300 mg/kg			
	inhalation (4 h) vapour	LC50 < 463 mg/l	Rat	Study report (2015)	OECD Guideline 403
	inhalation dust/mist	ATE 0,5 mg/l			
91-20-3	naphthalene				
	oral	LD50 710 mg/kg	Mouse	FUND. APPL. TOXICOL 4: 406-419 (1984) (1)	OECD Guideline 401
	dermal	LD50 > 16000 mg/kg	Rat	Study report (1980)	OECD Guideline 402

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	inhalation (4 h) vapour	LC50 mg/l	> 77,7	Rat	Study report (1985)	other: EPA TSCA
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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. (formaldehyde)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing genetic defects. (formaldehyde)

May cause cancer. (formaldehyde)

Suspected of causing cancer. (naphthalene)

Suspected of damaging the unborn child. (toluene)

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.

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

Endocrine disrupting properties: phenol, dodecyl-, branched.

Other information

No data available

Further information

No data available

SECTION 12: Ecological information

12.1. Toxicity

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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 > 433 mg/l	96 h	Pseudokirchneriella subcapitata	REACH Registration Dossier	Method: other
	Acute crustacea toxicity	EC50 11,5 mg/l	48 h	Daphnia magna	REACH Registration Dossier	Method: other
	Fish toxicity	NOEC 1,39 mg/l	40 d	Oncorhynchus kisutch	Transactions A. Fish. Soc. 110, 430-436.	Fry were exposed to toluene in a flow th
	Algae toxicity	NOEC > 400 mg/l	7 d	Scenedesmus quadricauda	REACH Registration Dossier	Method: other
	Crustacea toxicity	NOEC 0,74 mg/l	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 0,11 mg/l	96 h	Oncorhynchus mykiss	SIDS Initial Assessment Report For SIAM	OECD Guideline 203
	Acute algae toxicity	ErC50 2,943 mg/l	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 0,82 mg/l	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 0,73 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1996)	OECD Guideline 201
	Crustacea toxicity	NOEC 0,16 mg/l	21 d	Daphnia magna	Study report (2009)	OECD Guideline 211
64-17-5	ethanol					
	Acute fish toxicity	LC50 15400 mg/l	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination	other: EPA-660/3-75-009, 1975
	Acute algae toxicity	ErC50 ca. 22000 mg/l	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201

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	Acute crustacea toxicity	EC50 mg/l	> 10000	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11
	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
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 mg/l	ca. 22000	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
50-00-0	formaldehyde						
	Acute fish toxicity	LC50 mg/l	27,57	96 h	Ictalurus punctatus	Prog.Fish-Cult. 20(1):8-15 (1958)	acute toxicity test; "static bioassay"
	Acute algae toxicity	ErC50 mg/l	3,48	72 h	Desmodesmus subspicatus	Ecotoxicol Environ Safety 54: 346-354 (2	OECD Guideline 201
	Acute crustacea toxicity	EC50	5,8 mg/l	48 h	Daphnia pulex	Water, Air and Soil Pollution 97, 315-32	OECD Guideline 202
	Fish toxicity	NOEC mg/l	>= 48	28 d	Oryzias latipes	NTIS (ed.) Compendium of the FY1988 and	OECD Guideline 215
	Crustacea toxicity	NOEC mg/l	>= 6,4	21 d	Daphnia magna	Study report (2008)	OECD Guideline 211
	Acute bacteria toxicity	(EC50	19 mg/l)	3 h	Activated sludge	Chemosphere 14, 1239-1251 (1985)	OECD Guideline 209
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. 0,4 - ca. 0,5 mg/l	72 h	Skeletonema costatum	Mar Environ Res 11, 183-200 (1984)	Aquatic toxicity of water soluble fracti

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	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

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

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
67-56-1	methanol	-0,77
50-00-0	formaldehyde	0,35
91-20-3	naphthalene	3,4

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
67-56-1	methanol	1	Cyprinus carpio	Comparative Biochemi
50-00-0	formaldehyde	< 1	Paralichthys olivaceus and Sebastes schlegeli	Aquaculture 194, 253
91-20-3	naphthalene	36,5 - 168	Cyprinus carpio	http://www.safe.nite

12.4. Mobility in soil

No data available

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.

No data available

12.6. Endocrine disrupting properties

Endocrine disrupting properties: phenol, dodecyl-, branched.

12.7. Other adverse effects

Do not allow to enter into surface water or drains.

Avoid release to the environment.

Further information

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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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.

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)

14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (toluene, octane)
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, octane)
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

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (toluene, octane)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (toluene, octane)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Special Provisions:	A3
Limited quantity Passenger:	1 L
Passenger LQ:	Y341

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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: octane

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):
 Substances of very high concern, SVHC (REACH, article 59):
 phenol, dodecyl-, branched

Restrictions on use (REACH, annex XVII):
 Entry 3, Entry 28, Entry 30, Entry 40, Entry 48, Entry 69, Entry 75

National regulatory information

Water hazard class (D): 3 - highly hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,4,5,7,8,9,11,12,14,15.

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Asp. Tox. 1; H304	Calculation method
Skin Irrit. 2; H315	Calculation method
Skin Sens. 1; H317	Calculation method
Muta. 2; H341	Calculation method
Carc. 1B; H350	Calculation method
Carc. 2; H351	Calculation method
Repr. 2; H361d	Calculation method
STOT SE 3; H336	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

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.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360F	May damage fertility.
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 information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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