

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 1 of 15

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

1.1. Product identifier

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

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
Repr. 2; H361d
STOT SE 3; H336
STOT RE 2; H373
Aquatic Acute 1; H400
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

toluene
2,2,4-trimethylpentane
2,4,4-trimethylpentene

Signal word: Danger

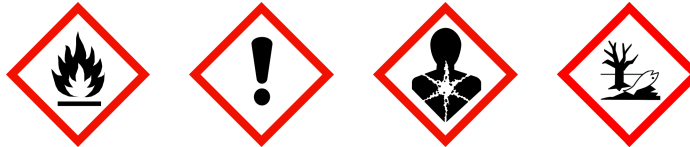
FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 2 of 15

Pictograms:



Hazard statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin 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.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
108-88-3	toluene	55 - < 60 %
	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	25 - < 30 %
	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	10 - < 15 %
	246-690-9	601-087-00-3
	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1; H225 H336 H304	
64-17-5	ethanol	5 - < 10 %
	200-578-6	603-002-00-5
	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319	

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

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 3 of 15

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	55 - < 60 %
		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	25 - < 30 %
		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	10 - < 15 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg	
64-17-5	200-578-6	ethanol	5 - < 10 %
		inhalation: LC50 = 124,7 mg/l (vapours); oral: LD50 = 10470 mg/kg Eye Irrit. 2; H319: >= 50 - 100	

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

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

Observe risk of aspiration if vomiting occurs.
Call a physician immediately.

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

Irritant, Headache
Dizziness, Dizziness
Vomiting, Inebriation
Spasms, Circulatory collapse
Respiratory complaints, Dyspnoea
Unconsciousness

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

Foam.

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 4 of 15

Extinguishing powder
Carbon dioxide (CO₂)

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible liquids
Beware of reignition.
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

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.

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 5 of 15

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.
Draw up and observe skin protection programme.

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 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/m ³	fib/cm ³	Category	Origin
64-17-5	Ethyl alcohol	1000	-		STEL (15 min)	
108-88-3	Toluene	50	192		TWA (8 h)	
		100	384		STEL (15 min)	

Safety Data Sheet

according to Regulation (EC) No 1907/2006

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 6 of 15

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

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 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

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 7 of 15

PNEC values

CAS No	Substance	Value
Environmental compartment		
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

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

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

Trade name/designation: KCL 890 Vitoject®

Suitable material: FKM (fluoro rubber) 0,7 mm

Wearing time with permanent contact: > 480 min

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 8 of 15

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): > 480 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.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Thermal hazards

No data available

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:	like: Hydrocarbons, aromatic	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		~78 °C
Flammability		
Solid/liquid:		No data available
Gas:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		-12 °C
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		No data available
Viscosity / kinematic:		No data available
Water solubility:		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:		0,7838 g/cm ³

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 9 of 15

Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	No data available
Particle characteristics:	No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Sustaining combustion: Sustaining combustion

Self-ignition temperature

Solid: No data available

Gas: No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate: No data available

Solvent separation test: No data available

Solvent content: No data available

Solid content: No data available

Sublimation point: No data available

Softening point: No data available

Pour point: No data available

: No data available

Viscosity / dynamic: No data available

Flow time: 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

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Oxidising agent

Nitric acid

Acetic acid

Strong acid

10.4. Conditions to avoid

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

10.5. Incompatible materials

Plastic articles

Rubber articles

10.6. Hazardous decomposition products

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 10 of 15

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

Toxicokinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
108-88-3	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				
	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

Irritation and corrosivity

Causes skin irritation.

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

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging the unborn child. (toluene)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

STOT-single exposure

May cause drowsiness or dizziness. (toluene; 2,2,4-trimethylpentane)

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.

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 11 of 15

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

Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

Further information

Irritant, Headache
Dizziness, Dizziness
Vomiting, Inebriation
Spasms, Circulatory collapse
Respiratory complaints, Dyspnoea
Unconsciousness

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 12 of 15

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-660/3-75-00 9, 1975
	Acute algae toxicity	ErC50 ca. 22000 mg/l	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 10000 mg/l	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 13 of 15

	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

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

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

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.

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.
Avoid release to the environment.

Further information

There are no data available on the mixture itself.

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

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 14 of 15

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, 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)
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, 2,2,4-trimethylpentane)
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, 2,2,4-trimethylpentane)
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
 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

SECTION 15: Regulatory information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

FAM test fluid A for polymer materials according to DIN 51604-1:2020-02

Revision date: 21.09.2022

Product code: 11372

Page 15 of 15

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 48, Entry 75

Information according to 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

Additional information: P5c

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,8,9,11,12,13,15,16.

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
Repr. 2; H361d	Calculation method
STOT SE 3; H336	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

Relevant H and EUH statements (number and full text)

- H225 Highly flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H361d Suspected of damaging the unborn child.
- 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.

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.)