

according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 1 of 15

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

1.1. Product identifier

Toluene / ethanol / acetone mixture mixed 4:2:3 volumetrically suitable for determination of the

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: AnalytiChem GmbH Street: Stempelstraße 6 Place: D-47167 Duisburg

Telephone: 0203/5194-0 Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire,

<u>number:</u> 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 Eye Irrit. 2; H319 Repr. 2; H361d STOT SE 3; H336 STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

toluene acetone

Signal word: Danger



according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 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.

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.

Precautionary statements

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.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331 Do NOT induce vomiting.

P403+P235 Store in a well-ventilated place. Keep cool.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Chemical name			
	EC No	Index No	REACH No		
	Classification (Regulation	on (EC) No 1272/2008)	·		
108-88-3	toluene			45 - < 50 %	
	203-625-9	601-021-00-3	01-2119471310-51		
	Flam. Liq. 2, Repr. 2, S H373 H304	Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H225 H361d H315 H336 H373 H304			
67-64-1	acetone			30 - < 35 %	
	200-662-2	606-001-00-8	01-2119471330-49		
	Flam. Liq. 2, Eye Irrit. 2	, STOT SE 3; H225 H319 H336 EUH	066		
64-17-5	ethanol			20 - < 25 %	
	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.



according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 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	45 - < 50 %
	inhalation: LC	50 = 28,1 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = 5580 mg/kg	
67-64-1	200-662-2	acetone	30 - < 35 %
	dermal: LD50	= > 7426 mg/kg; oral: LD50 = 5800 mg/kg	
64-17-5	200-578-6	ethanol	20 - < 25 %
		50 = 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 — skin irritation and eye damage, 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.

Extinguishing powder

Carbon dioxide (CO2)



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 4 of 15

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.

Other information

Provide adequate ventilation.



according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 5 of 15

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.

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/m³	fib/cm³	Category	Origin
67-64-1	Acetone	500	1210		TWA (8 h)	
64-17-5	Ethyl alcohol	1000	-		STEL (15 min)	
108-88-3	Toluene	50	192		TWA (8 h)	
		100	384		STEL (15 min)	



according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 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		Prior to last shift of workweek
67-64-1	Acetone	Acetone	50 mg/L	Urine	End of shift

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
108-88-3	toluene			
Worker DNEL,	long-term	inhalation	systemic	192 mg/m³
Worker DNEL,	acute	inhalation	systemic	384 mg/m³
Worker DNEL,	long-term	inhalation	local	192 mg/m³
Worker DNEL,	acute	inhalation	local	384 mg/m³
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/m³
Consumer DN	EL, long-term	inhalation	local	56,5 mg/m³
Consumer DN	EL, acute	inhalation	local	226 mg/m³
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
67-64-1	acetone			
Worker DNEL,	long-term	inhalation	systemic	1210 mg/m³
Worker DNEL,	acute	inhalation	local	2420 mg/m³
Worker DNEL,	long-term	dermal	systemic	186 mg/kg bw/day
Consumer DN	EL, long-term	inhalation	systemic	200 mg/m³
Consumer DN	EL, long-term	dermal	systemic	62 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	62 mg/kg bw/day
64-17-5	ethanol			
Worker DNEL, long-term		inhalation	systemic	950 mg/m³
Worker DNEL, long-term		dermal	systemic	343 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	114 mg/m³
Consumer DN	EL, long-term	dermal	systemic	206 mg/kg bw/day
Consumer DN	EL, long-term	oral	systemic	87 mg/kg bw/day



according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 7 of 15

PNEC values

Teshwater	CAS No	Substance	
Teshwater	Environmenta	l compartment	Value
Treshwater (intermittent releases) 0.68 mg/l Marine water	108-88-3	toluene	·
Adarine water 0,68 mg/l Freshwater sediment 16,39 mg/kg Adarine sediment 16,39 mg/kg Adarine sediment 13,61 mg/l Soil 2,89 mg/kg 57-64-1 acetone Freshwater (intermittent releases) 21 mg/l Adarine water 1,06 mg/l Freshwater sediment 30.4 mg/kg Adarine sediment 3,04 mg/kg Adarine sediment 3,04 mg/kg Adarine sediment 29,5 mg/kg 56-17-5 ethanol Freshwater (intermittent releases) 2,75 mg/l Adarine water 0,96 mg/l Freshwater (intermittent releases) 2,75 mg/l Adarine water 0,79 mg/l Freshwater sediment 3,6 mg/kg Adarine sediment 2,9 mg/kg Secondary poisoning 380 mg/kg	Freshwater		0,68 mg/l
Freshwater sediment 16,39 mg/kg Marine sediment 16,39 mg/kg Marine sediment 13,61 mg/l Soil 2,89 mg/kg 67-64-1 acetone Freshwater 10,6 mg/l Freshwater (intermittent releases) 21 mg/l Marine water 1,06 mg/l Freshwater sediment 30,4 mg/kg Marine sediment 30,4 mg/kg Micro-organisms in sewage treatment plants (STP) 100 mg/l Soil 29,5 mg/kg 44-17-5 ethanol Freshwater (intermittent releases) 2,75 mg/l Marine water 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 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	Freshwater (ir	ntermittent releases)	0,68 mg/l
Adarine sediment 16,39 mg/kg Adarine sediment 13,61 mg/l Soil 2,89 mg/kg 57-64-1 acetone Freshwater 10,6 mg/l Freshwater (intermittent releases) 21 mg/l Adarine water 1,06 mg/l Freshwater sediment 30,4 mg/kg Adarine sediment 3,04 mg/kg Adarine sediment 100 mg/l Soil 29,5 mg/kg Adarine sediment 0,96 mg/l Freshwater 0,96 mg/l Freshwater (intermittent releases) 2,75 mg/l Adarine water 0,79 mg/l Freshwater sediment 3,6 mg/kg Adarine sediment 3,6 mg/kg Adarine sediment 2,9 mg/kg	Marine water		0,68 mg/l
13,61 mg/l 2,89 mg/kg 2,10 mg/l 2,10 mg/l 2,10 mg/l 2,10 mg/kg 2,10 mg/l 2,10 mg/kg 2,10 mg	Freshwater se	diment	16,39 mg/kg
2,89 mg/kg 37-64-1 actione 10,6 mg/l 57-64-1 actione 10,6 mg/l 57-64-1	Marine sedim	ent	16,39 mg/kg
	Micro-organis	ms in sewage treatment plants (STP)	13,61 mg/l
10,6 mg/l 10,6	Soil		2,89 mg/kg
21 mg/l 1,06 m	67-64-1	acetone	
Marine water 1,06 mg/l Freshwater sediment 30,4 mg/kg Marine sediment 3,04 mg/kg Micro-organisms in sewage treatment plants (STP) 100 mg/l Soil 29,5 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	Freshwater		10,6 mg/l
Treshwater sediment 30,4 mg/kg 30,5 mg	Freshwater (ir	ntermittent releases)	21 mg/l
Marine sediment 3,04 mg/kg Micro-organisms in sewage treatment plants (STP) 100 mg/l Soil 29,5 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	Marine water		1,06 mg/l
Micro-organisms in sewage treatment plants (STP) 100 mg/l 29,5 mg/kg	Freshwater se	diment	30,4 mg/kg
29,5 mg/kg 34-17-5 ethanol	Marine sedim	ent	3,04 mg/kg
S4-17-5 ethanol	Micro-organis	ms in sewage treatment plants (STP)	100 mg/l
0,96 mg/l	Soil		29,5 mg/kg
Freshwater (intermittent releases) Agrine water O,79 mg/l Freshwater sediment Agrine sediment Secondary poisoning Alicro-organisms in sewage treatment plants (STP) 2,75 mg/l 3,6 mg/kg 2,9 mg/kg 380 mg/kg	64-17-5	ethanol	
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	Freshwater		0,96 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	Freshwater (ir	ntermittent releases)	2,75 mg/l
Marine sediment 2,9 mg/kg Secondary poisoning 380 mg/kg Micro-organisms in sewage treatment plants (STP) 580 mg/l	Marine water		0,79 mg/l
Secondary poisoning 380 mg/kg Micro-organisms in sewage treatment plants (STP) 580 mg/l	Freshwater sediment		3,6 mg/kg
Alicro-organisms in sewage treatment plants (STP) 580 mg/l	Marine sedim	2,9 mg/kg	
	Secondary po	380 mg/kg	
Soil 0,63 mg/kg	Micro-organis	ms 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: No data available

By short-term hand contact



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 8 of 15

Trade name/designation: KCL 890 Vitoject® Suitable material: FKM (fluoro rubber) 0,7 mm

Wearing time with occasional contact (splashes): > 10 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

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

Melting point/freezing point:

Boiling point or initial boiling point and

No data available

55 °C

boiling range:

Flammability: No data available Lower explosion limits: No data available Upper explosion limits: No data available -15 °C Flash point: No data available Auto-ignition temperature: 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

No data available Dissolution rate: No data available Partition coefficient n-octanol/water: Dispersion stability: No data available Vapour pressure: No data available Vapour pressure: No data available Density: 0,82554 g/cm3 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



according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 9 of 15

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 No data available Sublimation point: 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

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.



according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 10 of 15

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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	
67-64-1	acetone						
	oral	LD50 mg/kg	5800	Rat	J Toxicol Environ Health 15: 609-621 (19	Undiluted acetone applied to female rats	
	dermal	LD50 mg/kg	> 7426	Rabbit	Toxicol Appl Pharmacol 7: 559-565. (1965	other: Code of federal regulations: 21 C	
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.

Causes serious eye irritation.

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; acetone)

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.



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 11 of 15

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 — skin irritation and eye damage, 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.



according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 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 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		
67-64-1	acetone								
	Acute fish toxicity	LC50 mg/l	8120	96 h	Pimephales promelas	Publication (1984)	OECD Guideline 203		
	Acute crustacea toxicity	EC50 mg/l	8800	48 h	Daphnia pulex	Publication (1978)	The toxicity of acetone towards daphnids		
	Crustacea toxicity	NOEC mg/l	2212	28 d	Daphnia magna	Arch Environm Contam Toxicol 12: 305-310	Study conducted comparable to OECD 211 w		
	Acute bacteria toxicity	(EC50 mg/l)	61150	0,5 h	activated sludge of a predominantly domestic sewag	Water Res 26: 887-892 (1992)	ISO 8192		
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/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		
	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



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 13 of 15

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
67-64-1	acetone	-0,23
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).
67-64-1	acetone	3		Unpublished calculat
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

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, acetone)

14.3. Transport hazard class(es):314.4. Packing group:IIHazard label:3Classification code:F1

Special Provisions: 274 601 640D

Limited quantity: 1 L
Excepted quantity: E2
Transport category: 2



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 14 of 15

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, acetone)

14.3. Transport hazard class(es):314.4. Packing group:IIHazard label:3Classification 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, acetone)

14.3. Transport hazard class(es):314.4. Packing group:IIHazard label:3Special Provisions:274Limited quantity:1 LExcepted quantity:E2EmS: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, acetone)

14.3. Transport hazard class(es):314.4. Packing group:IIHazard label:3Special Provisions:A3Limited quantity Passenger:1 LPassenger LQ:Y341Excepted quantity:E2

IATA-packing instructions - Passenger:353IATA-max. quantity - Passenger:5 LIATA-packing instructions - Cargo:364IATA-max. quantity - Cargo:60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

SECTION 15: Regulatory information

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

Information according to 2012/18/EU P5c FLAMMABLE LIQUIDS

(SEVESO III):

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant

disappearances and thefts should be reported to the relevant national contact point.

National regulatory information



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Toluene / ethanol / acetone mixture mixed 4 : 2 : 3 volumetrically suitable for determination of the

Revision date: 24.08.2023 Product code: 20542 Page 15 of 15

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): 12.

Abbreviations and acronyms

Flam. Liq: Flammable liquid Asp. Tox: Aspiration hazard Skin Irrit: Skin irritation Eye Irrit: Eye irritation Repr: Reproductive toxicity

STOT SE: Specific target organ toxicity - single exposure STOT RE: Specific target organ toxicity - repeated exposure

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
Eye Irrit. 2; H319	Calculation method
Repr. 2; H361d	Calculation method
STOT SE 3; H336	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
11223	THATTY HATTITIANIC HAVIA ATTA VADOUT.

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.

EUH066 Repeated exposure may cause skin dryness or cracking.

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.)