

**1. Identification of the substance/preparation and of the company/undertaking***Identification of the product*

Catalogue No.: 100012  
Product name: Acetone for gas chromatography SupraSolv®

*Company/undertaking identification*

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 6151 72-0  
Emergency telephone No.: Please contact the regional Merck representation in your country.

**2. Composition/information on ingredients***Synonyms*

Dimethyl ketone, 2-Propanone

CAS-No.:	67-64-1	EC-Index-No.:	606-001-00-8
M:	58.08 g/mol	EC-No.:	200-662-2
Formula Hill:	C <sub>3</sub> H <sub>6</sub> O		
Chemical formula:	CH <sub>3</sub> COCH <sub>3</sub>		

**3. Hazards identification**

Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

**4. First aid measures**

After inhalation: fresh air. If necessary, apply mouth-to-mouth resuscitation or mechanical ventilation. Keep airways free.  
After skin contact: wash off with plenty of water. Remove contaminated clothing.  
After eye contact: rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Call in ophthalmologist.  
After swallowing: immediately make victim drink plenty of water.  
Subsequently administer: activated charcoal (20 - 40 g in 10% slurry).  
Risk of aspiration! Do not induce vomiting. Keep airways free. Call in physician.  
Laxative: Sodium sulfate (1 tablespoon/1/4 l water).

Indications for the doctor: After swallowing of large amounts: Gastric lavage.

**5. Fire-fighting measures**

Suitable extinguishing media:  
powder, foam.

Special risks:  
Combustible. Vapours heavier than air. Forms explosive mixtures with air at ambient temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

Special protective equipment for fire fighting:  
Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Other information:  
Keep away sources of ignition. Prevent fire-fighting water from entering surface water or groundwater. Cool container with spray water from a safe distance. Contain escaping vapours with water.

## Merck Safety Data Sheet

According to EC Directive  
91/155/EEC

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### 6. Accidental release measures

Person-related precautionary measures:

Avoid substance contact. Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:

Do not allow to enter sewerage system; risk of explosion!

Procedures for cleaning / absorption:

Take up with liquid-absorbent material (e.g. Chemisorb®). Forward for disposal. Clean up affected area.

### 7. Handling and storage

*Handling:*

Notes for prevention of fire and explosion:

Take measures to prevent electrostatic charging. Keep away from sources of ignition.

Notes for safe handling:

Work under hood. Do not inhale substance.

Avoid generation of vapours/aerosols.

*Storage:*

Tightly closed. In a well-ventilated place. Keep away from sources of ignition and heat. At +15°C to +25°C.

### 8. Exposure controls/personal protection

*Specific control parameter*

EC

Name	Acetone
Value	500 ml/m <sup>3</sup> 1210 mg/m <sup>3</sup>

*Personal protective equipment:*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated. Filter AX (EN 371)

Eye protection: required

Hand protection: required

Industrial hygiene:

Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance. Work under hood. Do not inhale substance.

### 9. Physical and chemical properties

Form:	liquid
Colour:	colourless
Odour:	fruity

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pH value at 395 g/l H <sub>2</sub> O		5-6		
Viscosity dynamic	(20 °C)	0.32	mPa*s	
Melting point		-95.4	°C	
Boiling point	(1013 hPa)	56.2	°C	
Ignition temperature		540	°C	
Flash point		< -20	°C	c.c.
Explosion limits	lower	2.6	Vol%	
	upper	13	Vol%	
Vapour pressure	(20 °C)	233	hPa	
Relative vapour density		2.01		
Density	(20 °C)	0.79	g/cm <sup>3</sup>	
Solubility in				
water	(20 °C)	soluble		
ethanol		soluble		
ether		soluble		
log Pow:		-0.24		(experimental)
Bioconcentration factor		0.69		
Dielectric constant	(25 °C)	20.7		

**10. Stability and reactivity***Conditions to be avoided*

Heating.

*Substances to be avoided*alkali hydroxides, halogens, halogenated hydrocarbons / alkali hydroxides, halogen-halogen compounds, oxidizing agent (i.a. CrO<sub>3</sub>, peroxy compounds, nitric acid, nitrating acid), halogen oxides, alkali metals, nitrosyl compounds, metals, ethanolamine.*Hazardous decomposition products*

peroxides.

*Further information*

solvent;

light-sensitive; sensitive to air.

unsuitable working materials: various plastics, rubber.

Explosible with air in a vaporous/gaseous state.

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**11. Toxicological information***Acute toxicity*

LD<sub>50</sub> (oral, rat): 5800 mg/kg.  
LC<sub>50</sub> (inhalation, rat): 76 mg/l /4 h.  
LD<sub>50</sub> (dermal, rabbit): 20000 mg/kg.

Specific symptoms in animal studies:  
Skin irritation test (rabbit): Irritations.  
Eye irritation test (rabbit): Irritations.

*Subacute to chronic toxicity*

No impairment of reproductive performance in animal experiments.  
Noncarcinogenic in animal experiments.

Bacterial mutagenicity:  
Salmonella typhimurium: negative.  
Bacillus subtilis: negative.  
Escherichia coli: negative.  
Ames-Test: negative.

Mutagenicity test acc. to OECD Test Guideline 476 (in vitro mammal cell test): negative.

Sensitization test (guinea pig): negative.

*Further toxicological information*

After inhalation of vapours: mucosal irritations, drowsiness, drowsiness. In high doses: headache, salivation, nausea, vomiting, dizziness, narcosis. Cannot be excluded: coma.  
After skin contact: Slight irritations. Drying-out effect resulting in rough and chapped skin.  
After eye contact: Irritations. Risk of corneal clouding.  
After swallowing: gastrointestinal complaints, headache, salivation, nausea, vomiting, dizziness, narcosis, coma.

*Further data*

The product should be handled with the care usual when dealing with chemicals.

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**12. Ecological information**

Biologic degradation:  
Biodegradation: 91 % /28 d;  
Readily biodegradable.

Behavior in environmental compartments:  
Distribution: log p(o/w): -0.24 (experimental).  
No bioaccumulation is to be expected (log P(o/w) <1).

Ecotoxic effects:  
Biological effects:  
Fish toxicity: *L.macrochirus* LC<sub>50</sub>: 8300 mg/l /96 h.  
Daphnia toxicity: *Daphnia magna* EC<sub>50</sub>: 12600-12700 mg/l /48 h.  
Maximum permissible toxic concentration:  
Algal toxicity: *Sc.quadricauda* IC<sub>5</sub>: 7500 mg/l /8 d;  
Bacterial toxicity: *M.aeruginosa* EC<sub>5</sub>: 530 mg/l /8 d; *Ps.putida* EC<sub>5</sub>: 1700 mg/l /16 h;  
Protozoa: *E.sulcatum* EC<sub>5</sub>: 28 mg/l /72 h.

Further ecologic data:  
Degradability:  
BOD<sub>5</sub>: 1.85 g/g;  
COD: 2.07 g/g;  
TOD: 2.20 g/g.

No ecological problems are to be expected when the product is handled and used with due care and attention.

**13. Disposal considerations***Product:*

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

*Packaging:*

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

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**14. Transport information**

Land transport GGVS, GGVE, ADR, RID  
Classification 3/3b  
Name 1090 ACETON

Transport by river ADN, ADNR  
Classification not tested

Transport by sea IMDG, GGVSee  
Classification 3.1/UN 1090/PG II  
Ems 3-06  
MFAG 300  
Name ACETONE

Transport by air ICAO, IATA  
Classification 3/UN 1090/PG II  
Name ACETONE

The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVS/GGVE). Possible national deviations in other countries are not considered.

THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

**15. Regulatory information***Labelling according to EC Directives*

Symbol:	F Xi	Highly flammable Irritant
R-phrases:	11-36-66-67	Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.
S-phrases:	9-16-26	Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
EC-No.:	200-662-2	EC label

**16. Other information**

Change in the chapter on toxicology.

General update.

*Regional representation:*

This information is given on the authorised Safety Data Sheet for your country.

*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*