

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.02.2023

Version number 8 (replaces version 7)

Revision: 15.02.2023


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

- **1.1 Product identifier**
- **Trade name:** **KEMCO MEK**
- **CAS Number:** 78-93-3
- **EC number:** 201-159-0
- **Index number:** 606-002-00-3
- **Registration number:** 01-2119457290-43
- **UFI:** 5NJ6-Q0YP-600M-VRCH
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category** PC1 Adhesives, sealants
- **Process category** PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring
- **Environmental release category** ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
- **Technical function** Solvent
Cleaning agent
- **Application of the substance / the mixture** Cleaning material/ Detergent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** KEMPER SYSTEM GmbH & Co. KG
Holländische Strasse 32-36
34246 Vellmar
Deutschland / Germany
Telefon: +49 (0)561 / 8295-0
Telefax: +49 (0)561 / 8295-5110
E-Mail: MSDS@KEMPER-SYSTEM.COM
- **Further information obtainable from:** research & development
- **1.4 Emergency telephone number:** Medical Emergency information in case of poisoning:
Poison Information Center Mainz - 24 h - Phone: +49 (0) 6131 19240
(advisory service in German or English language)


SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Flam. Liq. 2 H225 Highly flammable liquid and vapour.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
- **Hazard pictograms**

The substance is classified and labelled according to the CLP regulation.



GHS02



GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:** butanone
- **Hazard statements** H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
- **Precautionary statements**
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
 - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P405 Store locked up.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:** EUH066 Repeated exposure may cause skin dryness or cracking.

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- 2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

- Determination of endocrine-disrupting properties

List II

SECTION 3: Composition/information on ingredients

- 3.1 Substances
- CAS No. Description 78-93-3 butanone
- Identification number(s)
- EC number: 201-159-0
- Index number: 606-002-00-3

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- General information: Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Do not leave affected persons unattended. Personal protection for the First Aider. Take affected persons out of danger area and lay down.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation. Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly. Seek medical treatment in case of complaints.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. Protect unharmed eye.
- After swallowing: Rinse out mouth and then drink plenty of water. If symptoms persist consult doctor.
- 4.2 Most important symptoms and effects, both acute and delayed
 - Headache
 - Dizziness
 - Dizziness
 - Nausea
- 4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- 5.2 Special hazards arising from the substance or mixture
 - Formation of toxic gases is possible during heating or in case of fire.
 - Nitrogen oxides (NOx)
 - Carbon monoxide (CO)
- 5.3 Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device. Wear fully protective suit. Do not inhale explosion gases or combustion gases.
- Additional information: Cool endangered receptacles with water spray. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
 - Wear protective equipment. Keep unprotected persons away.
 - Keep away from ignition sources.

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- 6.2 Environmental precautions: Ensure adequate ventilation
Avoid contact with skin and eyes
Prevent from spreading (e.g. by damming-in or oil barriers).
Do not allow to enter sewers/ surface or ground water.

- 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

- 6.4 Reference to other sections See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Keep receptacles tightly sealed.
Open and handle receptacle with care.

- Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

- 7.2 Conditions for safe storage, including any incompatibilities

- Storage:

- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
Store in a cool location.
Prevent any seepage into the ground.

- Information about storage in one common storage facility: Store away from foodstuffs.

- Further information about storage conditions: Protect from frost.
Keep container tightly sealed.
Protect from heat and direct sunlight.
Recommended storage temperature: 5-30 °C
Store in dry conditions.

- Storage class: 3

- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters

| | |
|--|--|
| - Ingredients with limit values that require monitoring at the workplace: | |
| 78-93-3 butanone | |
| OEL | Short-term value: 900 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, IOELV |

- Regulatory information OEL: 2021 CoP for the Safety, Health and Welfare at Work

- Additional information: The lists valid during the making were used as basis.

- 8.2 Exposure controls

- Appropriate engineering controls No further data; see item 7.

- Individual protection measures, such as personal protective equipment

- General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

- Respiratory protection: When used properly and under normal conditions, breathing protection is not required.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter A/P2
Respiratory protection - Gas filters and combination filters according to (DIN EN 141)

- Hand protection Check protective gloves prior to each use for their proper condition.
Only use chemical-protective gloves with CE-labelling of category III.

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
After use of gloves apply skin-cleaning agents and skin cosmetics.



Protective gloves

- Material of gloves

Recommended materials:

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.5 mm

Penetration time (min.): < 480

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.1 mm

Penetration time (min.): < 10

- Eye/face protection



Tightly sealed goggles

- Body protection:

Protective goggles and facial protection - Classification according to EN 166 protective clothing (EN 13034)

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Physical state

Fluid

- Colour:

Colourless

- Odour:

Pleasant

- Odour threshold:

Not determined.

- Melting point/freezing point:

-86 °C

- Boiling point or initial boiling point and boiling range

80 °C

- Flammability

Not applicable.

- Lower and upper explosion limit

- Lower:

1 Vol %

- Upper:

11.5 Vol %

- Flash point:

-9 °C

- Decomposition temperature:

Not determined.

- pH

Not determined.

- Viscosity:

- Kinematic viscosity at 20 °C

1 mm²/s

- Solubility

- water at 20 °C:

290 g/l

- Partition coefficient n-octanol/water (log value)

Not determined.

- Density and/or relative density

- Density at 20 °C:

0.81 g/cm³

- Relative density

Not determined.

- Vapour density

Not determined.

- 9.2 Other information

- Appearance:

- Form:

Fluid

- Important information on protection of health and environment, and on safety.

- Auto-ignition temperature:

Not determined.

- Explosive properties:

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- VOC (EC)

100.00 %

- Molecular weight

72.11 g/mol

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- Change in condition
 - Evaporation rate Not determined.

- Information with regard to physical hazard classes

- Explosives Void
- Flammable gases Void
- Aerosols Void
- Oxidising gases Void
- Gases under pressure Void
- Flammable liquids Highly flammable liquid and vapour.
- Flammable solids Void
- Self-reactive substances and mixtures Void
- Pyrophoric liquids Void
- Pyrophoric solids Void
- Self-heating substances and mixtures Void
- Substances and mixtures, which emit flammable gases in contact with water Void
- Oxidising liquids Void
- Oxidising solids Void
- Organic peroxides Void
- Corrosive to metals Void
- Desensitised explosives Void

SECTION 10: Stability and reactivity

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability No further relevant information available.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

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.

- LD/LC50 values relevant for classification:

78-93-3 butanone

| | | |
|------------|----------|----------------------------------|
| Oral | LD50 | 2,193 mg/kg (rat) (OECD 423) |
| Dermal | LD50 | >5,000 mg/kg (rabbit) (OECD 402) |
| Inhalative | LC50 | mg/l (Skeletonema costatum) |
| | LC50/4 h | 34 mg/l (rat) |

- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Causes serious eye irritation.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure May cause drowsiness or dizziness.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.
- 11.2 Information on other hazards

- Endocrine disrupting properties

List II

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SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

78-93-3 butanone

| | |
|------|--|
| LC50 | 2,990 mg/l (Pimephales promelas) (96h; OECD 203) |
| EC50 | 1,972 mg/l (Pseudokirchneriella subcapitata) (72h; OECD 201) |
| EC50 | 308 mg/l (Daphnia magna) (48h; OECD 202) |
| EC0 | 1,150 mg/l (Pseudomonas putida) (16h; DIN 38412) |

- 12.2 Persistence and degradability

No further relevant information available.

- 12.3 Bioaccumulative potential

No further relevant information available.

- 12.4 Mobility in soil

No further relevant information available.

- 12.5 Results of PBT and vPvB assessment

- PBT:

Not applicable.

- vPvB:

Not applicable.

- 12.6 Endocrine disrupting properties

For information on endocrine disrupting properties see section 11.

- 12.7 Other adverse effects

- Additional ecological information:

- General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods

- Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Disposal according to official regulations

- European waste catalogue

| | |
|-----------|--|
| 08 04 09* | waste adhesives and sealants containing organic solvents or other hazardous substances |
| 15 01 10* | packaging containing residues of or contaminated by hazardous substances |
| 17 02 03 | plastic |

- Uncleaned packaging:

- Recommendation:

Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN number or ID number

- ADR, IMDG, IATA

UN1193

- 14.2 UN proper shipping name

- ADR 1193 ETHYL METHYL KETONE (METHYL ETHYL KETONE)
- IMDG, IATA ETHYL METHYL KETONE (METHYL ETHYL KETONE)

- 14.3 Transport hazard class(es)

- ADR



- Class

3 (F1) Flammable liquids.

- Label

3

- IMDG, IATA



- Class

3 Flammable liquids.

- Label

3

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| | |
|--|---|
| - 14.4 Packing group | II |
| - ADR, IMDG, IATA | |
| - 14.5 Environmental hazards: | |
| - Marine pollutant: | No |
| - 14.6 Special precautions for user | Warning: Flammable liquids. |
| - Hazard identification number (Kemler code): | 33 |
| - EMS Number: | F-E,S-D |
| - Stowage Category | B |
| - 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| - Transport/Additional information: | |
| - ADR | |
| - Limited quantities (LQ) | 1L |
| - Excepted quantities (EQ) | Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |
| - Transport category | 2 |
| - Tunnel restriction code | D/E |
| - IMDG | |
| - Limited quantities (LQ) | 1L |
| - Excepted quantities (EQ) | Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |
| - UN "Model Regulation": | UN 1193 ETHYL METHYL KETONE (METHYL ETHYL KETONE), 3, II |

SECTION 15: Regulatory information

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

- Directive 2012/18/EU

- Named dangerous substances - ANNEX I Substance is not listed.
 - Seveso category P5c FLAMMABLE LIQUIDS

- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

Substance is not listed.

- REGULATION (EU) 2019/1148

- Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

- Annex II - REPORTABLE EXPLOSIVES PRECURSORS

Substance is not listed.

- Regulation (EC) No 273/2004 on drug precursors

3

- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

3

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: research & development

- Contact: research & development

- Date of previous version: 29.06.2021

- Version number of previous version: 7

- Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- Sources

- www.echa.europa.eu
- www.baua.de

IFA: Institute für Occupational Safety and Health of the German Social Accident Insurance:
- www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index.jsp
- www.dguv.de/ifa/gestis/gestis-dnel-liste

- * Data compared to the previous version altered.

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Annex: Exposure scenario

| | |
|--|--|
| <ul style="list-style-type: none"> - Short title of the exposure scenario - Sector of Use - Description of the activities / processes covered in the Exposure Scenario - Conditions of use - Duration and frequency - Worker - Environment - Physical parameters - Physical state - Concentration of the substance in the mixture - Other operational conditions - Other operational conditions affecting environmental exposure - Other operational conditions affecting worker exposure - Other operational conditions affecting consumer exposure - Other operational conditions affecting consumer exposure during the use of the product - Risk management measures - Worker protection - Organisational protective measures - Technical protective measures - Personal protective measures - Measures for consumer protection - Environmental protection measures - Disposal measures - Disposal procedures - Waste type - Exposure estimation - Consumer | <p>Use in cleaning agents SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</p> <p>See section 1 of the annex to the Safety Data Sheet. consult TDS 5 workdays/week. 8hrs (full working shift). No exposure assessment presented for the environment.</p> <p>Fluid</p> <p>Raw material.</p> <p>No special measures required.</p> <p>Avoid contact with eyes. Take precautionary measures against static discharge. Keep away from sources of ignition - No smoking. Ensure adequate ventilation, especially in closed rooms.</p> <p>Identified use: intended for professional use only! Keep out of the reach of children.</p> <p>Not applicable.</p> <p>No special measures required. Provide explosion-proof electrical equipment. Ensure that suitable extractors are available on processing machines Do not inhale gases / fumes / aerosols. Avoid contact with the eyes. Tightly sealed goggles Check protective gloves prior to each use for their proper condition. Only use chemical-protective gloves with CE-labelling of category III. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation After use of gloves apply skin-cleaning agents and skin cosmetics. Protective gloves</p> <p>Identified use: intended for professional use only! Ensure adequate labelling. Keep locked up and out of the reach of children.</p> <p>Avoid release to the environment. Obtain special instructions / refer to Safety Data Sheet. Disposal must be made according to official regulations. Ensure that waste is collected and contained. Must not be disposed together with household garbage. Do not allow product to reach sewage system. Partially emptied and uncleaned packaging</p> <p>Not relevant for this Exposure Scenario.</p> |
|--|--|