



## SAFETY DATA SHEET

# Methyl ethyl keton (MEK) 99,5+%

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

<i>Trade name:</i>	Methyl ethyl keton (MEK) 99,5+%
<i>Product no.:</i>	ME934
<i>Other means of identification:</i>	Index No.: 606-002-00-3 EC No.: 201-159-0 CAS No.: 78-93-3

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

<i>Relevant identified uses of the substance or mixture:</i>	Industrial purposes, Laboratory use
<i>Uses advised against:</i>	None known.

### 1.3. Details of the supplier of the safety data sheet

<i>Company and address:</i>	<b>Laboratoriumdiscounter</b> Zandvoortstraat 75 1976BN IJmuiden Netherlands Tel: +31 255 700 210 <a href="http://www.laboratoriumdiscounter.nl/en/">www.laboratoriumdiscounter.nl/en/</a>
<i>E-mail:</i>	<a href="mailto:info@laboratoriumdiscounter.nl">info@laboratoriumdiscounter.nl</a>
<i>Revision:</i>	13/03/2023
<i>SDS Version:</i>	1.0

### 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).  
See section 4 "First aid measures".

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

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

*Hazard pictogram(s):*



*Signal word:*

Danger

*Hazard statement(s):*

Highly flammable liquid and vapour. (H225)  
Causes serious eye irritation. (H319)  
May cause drowsiness or dizziness. (H336)



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#### Safety statement(s):

*General:*

If medical advice is needed, have product container or label at hand. (P101)  
Keep out of reach of children. (P102)

*Prevention:*

Wash hands thoroughly after handling. (P264)  
Wear eye protection/protective gloves/protective clothing. (P280)

*Response:*

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)  
If eye irritation persists: Get medical advice/attention. (P337+P313)

*Storage:*

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

*Disposal:*

Dispose of contents/container in accordance with local regulation. (P501)

*Hazardous substances:*

butanone;ethyl methyl ketone

*Additional labelling:*

EUH066, Repeated exposure may cause skin dryness or cracking.

### 2.3. Other hazards

*Additional warnings:*

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Product/substance	Identifiers	% w/w	Classification	Note
butanone;ethyl methyl ketone	CAS No.: 78-93-3 EC No.: 201-159-0 UK-REACH: Index No.: 606-002-00-3	95-100%	EUH066 Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1]

### 3.2. Mixtures

Not applicable. This product is a substance.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### Other information

[1] European occupational exposure limit.



## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

*General information:*

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

*Inhalation:*

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

*Skin contact:*

IF ON SKIN: Wash with plenty of water and soap.

Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

*Eye contact:*

Upon irritation of the eye: Remove contact lenses. Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

*Ingestion:*

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

*Burns:*

Rinse with water until pain stops then continue to rinse for 30 minutes.

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

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other



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hazardous substances at the area of exposure.

#### 4.3. Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.

#### Information to medics

Bring this safety data sheet or the label from this product.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

### 5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO<sub>2</sub>)

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: ●2YE

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

Avoid inhalation of vapours from spilled material.

### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

### 6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Ground and bond container and receiving equipment.



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Use explosion-proof [electrical/lighting/ventilating] equipment.  
Use non-sparking tools.  
Take action to prevent static discharges.  
Smoking, drinking and consumption of food is not allowed in the work area.  
See section 8 "Exposure controls/personal protection" for information on personal protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Take action to prevent static discharges.

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

*Recommended storage material:*

Keep only in original packaging.

*Storage temperature:*

Room temperature 15 to 25°C

*Incompatible materials:*

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

butanone;ethyl methyl ketone

Long term exposure limit (8 hours) (ppm): 200

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 600

Short term exposure limit (15 minutes) (ppm): 300

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 899

Annotations:

BMVG = Biological Monitoring Guidance Value exists

Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.

EH40/2005 Workplace exposure limits (Fourth Edition 2020).

### DNEL

butanone;ethyl methyl ketone

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	412 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	1161 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	106 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	600 mg/m <sup>3</sup>
Short term – Systemic effects - General population	Inhalation	450 mg/m <sup>3</sup>
Short term – Systemic effects - Workers	Inhalation	900 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	31 mg/kg bw/day

### PNEC

butanone;ethyl methyl ketone



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Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		55.8 mg/L
Freshwater sediment		284.74 mg/kg
Intermittent release (freshwater)		55.8 mg/L
Marine water		55.8 mg/L
Marine water sediment		284.7 mg/kg
Predators		1 g/kg
Sewage treatment plant		709 mg/L
Soil		22.5 mg/kg

## 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

*General recommendations:*

Smoking, drinking and consumption of food is not allowed in the work area.

*Exposure scenarios:*

There are no exposure scenarios implemented for this product.

*Exposure limits:*

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

*Appropriate technical measures:*

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

*Hygiene measures:*

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

*Measures to avoid environmental exposure:*


No specific requirements.

## Individual protection measures, such as personal protective equipment


*Generally:*

Use only UKCA marked protective equipment.

*Respiratory Equipment:*

Type	Class	Colour	Standards	
A	Class 3 (High capacity)	Brown	EN14387	


*Skin protection:*

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	


*Hand protection:*



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Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Butyl	0,3	> 60	EN374-2, EN374-3, EN388, EN421	

Eye protection:

Type	Standards	
Safety glasses with side shields.	EN166	

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Liquid
<i>Colour:</i>	Colourless
<i>Odour / Odour threshold:</i>	Solvent
<i>pH:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Density (g/cm<sup>3</sup>):</i>	0.81 (20 °C)
<i>Kinematic viscosity:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Particle characteristics:</i>	Does not apply to liquids.

#### Phase changes

<i>Melting point/Freezing point (°C):</i>	-86
<i>Softening point/range (waxes and pastes) (°C):</i>	Does not apply to liquids.
<i>Boiling point (°C):</i>	80
<i>Vapour pressure:</i>	105 hPa (20 °C)
<i>Relative vapour density:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Decomposition temperature (°C):</i>	Testing not relevant or not possible due to the nature of the product.

#### Data on fire and explosion hazards

<i>Flash point (°C):</i>	-8 °C (c.c.)
<i>Flammability (°C):</i>	The material is ignitable.
<i>Auto-ignition temperature (°C):</i>	475
<i>Lower and upper explosion limit (% v/v):</i>	1.5 - 11.5

#### Solubility

<i>Solubility in water:</i>	290 g /l
<i>n-octanol/water coefficient:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Solubility in fat (g/L):</i>	Testing not relevant or not possible due to



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the nature of the product.

## 9.2. Other information

*Other physical and chemical parameters:*

No data available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

Avoid static electricity.

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

#### Acute toxicity

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

#### Skin corrosion/irritation

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

#### Serious eye damage/irritation

Causes serious eye irritation.

#### Respiratory sensitisation

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

#### 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.





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### **Aspiration hazard**

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

### **11.2. Information on other hazards**

#### **Long term effects**

**Irritation effects:** This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

**Neurotoxic effects:** This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

#### **Endocrine disrupting properties**

Not applicable.

#### **Other information**

None known.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **12.1. Toxicity**

No data available.

### **12.2. Persistence and degradability**

No data available.

### **12.3. Bioaccumulative potential**

No data available.

### **12.4. Mobility in soil**

No data available.

### **12.5. Results of PBT and vPvB assessment**

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

### **12.6. Endocrine disrupting properties**

Not applicable.

### **12.7. Other adverse effects**

None known.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

### **Waste treatment methods**

Product is covered by the regulations on hazardous waste.

HP 3 - Flammable

HP 4 - Irritant (skin irritation and eye damage)

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

### **EWC code**

Not applicable.



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### Specific labelling

Not applicable.

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN1193	ETHYL METHYL KETONE (METHYL ETHYL KETONE)	Class: 3 Labels: 3 Classification code: F1 	II	No	Limited quantities: 1 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1193	ETHYL METHYL KETONE (METHYL ETHYL KETONE)	Class: 3 Labels: 3 Classification code: F1 	II	No	Limited quantities: 1 L EmS: F-E S-D See below for additional information.
IATA	UN1193	ETHYL METHYL KETONE (METHYL ETHYL KETONE)	Class: 3 Labels: 3 Classification code: F1 	II	No	See below for additional information.

\* Packing group

\*\* Environmental hazards

### Additional information

ADR / See Table A, Section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: ●2YE

### 14.6. Special precautions for user

Not applicable.

### 14.7. Maritime transport in bulk according to IMO instruments

No data available.



## SECTION 15: REGULATORY INFORMATION

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

*Restrictions for application:*

People under the age of 18 shall not be exposed to this product.  
Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

*Demands for specific education:*

No specific requirements.

*SEVESO - Categories / dangerous substances:*

P5c - FLAMMABLE LIQUIDS, Qualifying quantity (lower-tier): 5.000 tonnes / (upper-tier): 50.000 tonnes

*Regulation on drug precursors:*

butanone;ethyl methyl ketone is included (Category 3)

*Additional information:*

Tactile warning.

*Sources:*

The Health and Safety at Work etc. Act 1974 Regulations 2013.  
Control of Major Accident Hazards (COMAH) Regulations 2015.  
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.  
The Controlled Drugs (Drug Precursors) Regulations 2008.  
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.  
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

### 15.2. Chemical safety assessment

No

## SECTION 16: OTHER INFORMATION

### Full text of H-phrases as mentioned in section 3

EUH066, Repeated exposure may cause skin dryness or cracking.

H225, Highly flammable liquid and vapour.

H319, Causes serious eye irritation.

H336, May cause drowsiness or dizziness.

### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway



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ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
CAS = Chemical Abstracts Service  
CE = Conformité Européenne  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
CSA = Chemical Safety Assessment  
CSR = Chemical Safety Report  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EINECS = European Inventory of Existing Commercial chemical Substances  
ES = Exposure Scenario  
EUH statement = CLP-specific Hazard statement  
EWC = European Waste Catalogue  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IARC = International Agency for Research on Cancer (IARC)  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SCL = A specific concentration limit  
SVHC = Substances of Very High Concern  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
TWA = Time weighted average  
UN = United Nations  
UVBC = Unknown or variable composition, complex reaction products or of biological materials  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative

### Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The classification of the mixture in regard to physical hazards has been based on experimental data.

### The safety data sheet is validated by

Laboratoriumdiscounter

### Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en