

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Potassium hydroxide 0.05 mol/l - 0.05 N solution in ethanol 92 vol. % denatured

Revision date: 02.09.2021

Product code: 05082

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

1.1. Product identifier

Potassium hydroxide 0.05 mol/l - 0.05 N solution in ethanol 92 vol. % denatured

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

Use of the substance/mixture

Laboratory chemical

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

Met. Corr. 1; H290

Flam. Liq. 2; H225

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

potassium hydroxide

Signal word: Danger

Pictograms:



Hazard statements

H225

Highly flammable liquid and vapour.

H290

May be corrosive to metals.

H319

Causes serious eye irritation.

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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.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No information 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)			
64-17-5	ethanol			95 - < 100 %
	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.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64-17-5	200-578-6	ethanol	95 - < 100 %
	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

Self-protection of the first aider

After inhalation

Provide fresh air.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Remove contact lenses, if present and easy to do. Continue rinsing. Protect uninjured eye.

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After ingestion

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

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

corrosive
Irritant
Cough
Dyspnoea
Dizziness
The product causes narcotic-like effects.
Inebriation
Vomiting

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

Water spray jet, Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible liquid.
Vapours are heavier than air, spread along floors and form explosive mixtures with air.
Hazardous combustion products
In case of fire may be liberated: Carbon dioxide (CO₂) Carbon monoxide
Beware of reignition.

5.3. Advice for firefighters

Remove persons to safety. Do not inhale explosion and combustion gases.
Avoid contact with skin, eyes and clothes.
In case of fire: Wear self-contained breathing apparatus.
Use water spray jet to protect personnel and to cool endangered containers.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Suppress gases/vapours/mists with water spray jet.
Move undamaged containers from immediate hazard area if it can be done safely.

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.
Corrosive to metals.

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.

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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.

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 vapour/aerosol. 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

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

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.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

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Further information on storage conditions

Vapours may form explosive mixtures with air.
storage temperature +15°C - +25°C

7.3. Specific end use(s)

Laboratory use Laboratory chemical

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)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
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

PNEC values

CAS No	Substance	Value
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

Suitable eye protection: goggles.

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

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By long-term hand contact
Recommended glove articles: KCL 897 Butoject®
Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Recommended glove articles KCL 720 Camapren®
Suitable material: CR (polychloroprene, chloroprene rubber) 0,65 mm
Wearing time with occasional contact (splashes): > 60 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

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: clear / yellow
Odour: like: Ethanol
Odour threshold: No data available

Changes in the physical state

Melting point/freezing point: ~114 °C
Boiling point or initial boiling point and boiling range: ~78 °C
Sublimation point: No data available
Softening point: No data available
Pour point: No data available
No data available:
Flash point: 12 °C

Flammability

Solid/liquid: not applicable
Gas: not applicable

Explosive properties

Vapours can form explosive mixtures with air.

Lower explosion limits: 3,5 vol. %
Upper explosion limits: 15 vol. %
Auto-ignition temperature: 425 °C

Self-ignition temperature

Solid: not applicable

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Gas:	not applicable
Decomposition temperature:	not determined
pH-Value:	alkaline
Viscosity / dynamic: (at 20 °C)	1,2 mPa·s
Viscosity / kinematic:	No data available
Flow time:	No data available
Water solubility:	Soluble in: Water
Solubility in other solvents	
not determined	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure: (at 20 °C)	59 hPa
Vapour pressure:	No data available
Density:	~0,796 g/cm ³
Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	not determined
Particle characteristics:	No data available

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion:	Sustaining combustion
Oxidizing properties	
Not oxidising.	

Other safety characteristics

Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	not determined
Evaporation rate:	not determined

Further Information

May be corrosive to metals.

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable.
Vapours can form explosive mixtures with air.
May be corrosive to metals.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Oxidising agent, Hydrogen peroxide, Nitric acid, Alkali metals, Alkaline earth metal
Chlorine, Fluorine, silver, permanganates, e.g. potassium permanganate

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

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10.5. Incompatible materials

Glass
Plastic articles
Metal

10.6. Hazardous decomposition products

Hazardous combustion products
In case of fire may be liberated: Carbon dioxide (CO₂) Carbon monoxide

Further information

No data available

SECTION 11: Toxicological information

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.
If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
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 serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Risk of serious damage to eyes.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

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.
Observe risk of aspiration if vomiting occurs.

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.

11.2. Information on other hazards

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Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

corrosive

Irritant

Cough

Dyspnoea

Dizziness

The product causes narcotic-like effects.

Inebriation

Vomiting

Risk of serious damage to eyes.

Corneal opacity.

Further information

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

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
64-17-5	ethanol					
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination other: EPA-660/3-75-009, 1975
	Acute algae toxicity	ErC50 mg/l	ca. 22000	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

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol	-0,77

BCF

CAS No	Chemical name	BCF	Species	Source
64-17-5	ethanol	1	Cyprinus carpio	Comparative Biochemi

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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.

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.

There are no data available on the mixture itself.

12.7. Other adverse effects

There are no data available on the mixture itself.

Further information

Avoid release to the environment.

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains.

Send to a physico-chemical treatment facility under observation of official regulations.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 2924
14.2. UN proper shipping name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ethanol, potassium hydroxide)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+8
Classification code:	FC
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	338
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2924
14.2. UN proper shipping name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ethanol, potassium hydroxide)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+8
Classification code:	FC
Special Provisions:	274
Limited quantity:	1 L

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Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 2924
14.2. UN proper shipping name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ethanol, potassium hydroxide)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3+8
 Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-E, S-C

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 2924
14.2. UN proper shipping name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ethanol, potassium hydroxide)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3+8
 Special Provisions: A3
 Limited quantity Passenger: 0.5 L
 Passenger LQ: Y340
 Excepted quantity: E2
 IATA-packing instructions - Passenger: 352
 IATA-max. quantity - Passenger: 1 L
 IATA-packing instructions - Cargo: 363
 IATA-max. quantity - Cargo: 5 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Combustible liquid.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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 75

Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information

Changes

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

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Abbreviations and acronyms

ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.
H290 May be corrosive to metals.
H319 Causes serious eye irritation.

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.)