Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.03.2015 Version number 3 Revision: 18.03.2015

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

1.1 Product identifier

Trade name: KHELLIN ≥98%, for biochemistry

Article number: 5911

CAS Number:
82-02-0
EC number:
201-392-8

Registration number
A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Application of the substance / the mixture
Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Carl Roth GmbH + Co. KG
Schoemperlenstraße 3-5
76185 Karlsruhe
Germany
Telefon: +49/(0)721 5606-0 Telefax: +49/(0)721 5606-149 E-Mail: sicherheit@carlroth.de

Further information obtainable from: Department Health, Safety and Environment

1.4 Emergency telephone number:
Poison Centre Munich Telefon +49/(0)89 19240

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Acute Tox. 3 H301 Toxic if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC
T; Toxic
R25: Toxic if swallowed.
Xi; Irritant
R38: Irritating to skin.

Additional information: Note, not yet fully tested.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

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Hazard pictograms

GHS06

Signal word Danger

Hazard statements
H301 Toxic if swallowed.
H315 Causes skin irritation.

Precautionary statements
P270 Do not eat, drink or smoke when using this product.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P405 Store locked up.

Additional information:
-

2.3 Other hazards
All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation: Substances

CAS No. Description
82-02-0 khellin

Identification number(s)
EC number: 201-392-8
Formula: $C_{14}H_{12}O_5$
Molar mass [g/mol]: 260,24

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SECTION 4: First aid measures

4.1 Description of first aid measures

General information:
Immediately remove any clothing soiled by the product.

After inhalation:
Take affected persons into fresh air and keep quiet.
If breathing is difficult, give oxygen. Seek medical treatment.

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After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Seek medical treatment in case of complaints.

After eye contact:
To be sure rinse opened eye under running water. If there is any trouble seek medical help.

After swallowing:
Rinse out mouth and then drink water.
Call for a doctor immediately and show the container or label.

4.2 Most important symptoms and effects, both acute and delayed
Irritations
Allergic reactions
Headache
insomnia
Dizziness
Nausea

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO2, powder,foam or water spray.

For safety reasons unsuitable extinguishing agents:
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

In the event of fire development of hazardous combustion gases or vapours possible.
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide

5.3 Advice for firefighters

Protective equipment:
Wear self-contained respiratory protective device.
In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

*
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear personal protective equipment.
Do not breathe dust.
Avoid contact with the eyes and skin.

6.2 Environmental precautions
Do not allow product to reach sewage system or any water course.

6.3 Methods and material for containment and cleaning up
Pick up mechanically.
Avoid formation of dust
Dispose of the material collected according to regulations.

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

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling
Provide suction extractors if dust is formed.
Keep containers, equipment and working place clean.

Information about fire - and explosion protection:
Risk of dust explosion if enriched with fine dust in the presence of air.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:
Store only in the original receptacle.

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

Further information about storage conditions:
Keep container tightly sealed.
Store in dry conditions.
Store under lock and key and with access restricted to technical experts or their assistants only.

Recommended storage temperature: 15 - 25 °C

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

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SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities:
No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

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

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Do not eat, drink or smoke while working.
Do not breathe dust.
Avoid contact with the eyes and skin.
Clean skin thoroughly immediately after handling the product.

Individual protection measures
Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

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Respiratory protection:

Required when dusts are generated: filter P2-P3.
When selecting your respiratory unit: Consider the "Rules for the use of respiratory protection equipment" (BGR190).

Protection of hands:

Protective gloves
Check protective gloves prior to each use for their proper condition.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
Nitrile, thickness: ≥ 0.11 mm
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
Value for the permeation: Level ≥ 6
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable:
Nitrile, thickness: ≥ 0.11 mm

Eye protection:

Tightly sealed goggles

Body protection:
Protective work clothing

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:	
Form:	Crystalline powder
Colour:	white to yellowish
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	No information available.
Change in condition	
Melting point/Melting range:	150-154 °C

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Boiling point/Boiling range:	No information available.
Flash point:	No information available
Flammability (solid, gaseous):	No information available
Ignition temperature:	No information available
Decomposition temperature:	No information available
Self-igniting:	No information available
Danger of explosion:	Not classified als explosive.
Explosion limits:	
Lower:	No information available.
Upper:	No information available.
Oxidizing properties:	No information available.
Vapour pressure:	No information available
Density:	No information available.
Vapour density	No information available
Evaporation rate	No information available
Solubility in / Miscibility with water:	Slightly soluble.
Partition coefficient (n-octanol/water):	3.0 log POW (TOXNET)
Viscosity:	
Dynamic:	No information available.
Kinematic:	No information available.
9.2 Other information	No further relevant information available.

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SECTION 10: Stability and reactivity

10.1 Reactivity
The following applies in general to flammable organic substances and preparations: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
Reacts with strong oxidising agents.

10.4 Conditions to avoid
No information available.

10.5 Incompatible materials:
No information available.

10.6 Hazardous decomposition products:
In case of fire: see item 5.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

Oral	LD_{50}	68.8 mg/kg (rat) (TOXNET)

Primary irritant effect:

on the skin:
Irritant to skin and mucous membranes.

on the eye:
Slight irritations

after inhalation:
Intensive contact with dusts may lead to irritations of the eyes and the respiratory tract.

Sensitisation:
No sensitising effects known.

CMR effects:
Germ cell mutagenicity:
No information available.
Carcinogenicity:
No information available.
Reproductive toxicity:
No information available.

Aspiration hazard:
Not applicable.

Specific target organ toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Additional toxicological information:
After swallowing:
Absorption
After absorption:
Headache
Dizziness
Nausea
After uptake of large quantities:
gastrointestinal complaints
Damage of nervous system.
Death

Further information:
To the best of our knowledge, the toxicological properties have not been thoroughly investigated. Further hazardous properties cannot be excluded.
The product should be handled with the care usual when dealing with chemicals.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:
Quantitative data on the ecological effect of this product are not available.

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12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected (log POW ≤4).

12.4 Mobility in soil
No further relevant information available.

Ecotoxical effects:

Remark:
Do not allow to enter waters, waste water, or soil!

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects
No further relevant information available.

*
SECTION 13: Disposal considerations

Waste treatment methods

Recommendation
This material and its container must be disposed of as hazardous waste.
The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

Uncleaned packaging:

Recommendation:
Disposal according to official regulations.

*
SECTION 14: Transport information

14.1 UN-Number

ADR, IMDG, IATA	UN2811

14.2 UN proper shipping name

ADR	2811 TOXIC SOLID, ORGANIC, N.O.S. (khellin)
IMDG, IATA	TOXIC SOLID, ORGANIC, N.O.S. (khellin)

14.3 Transport hazard class(es)

ADR, IMDG, IATA

Class	6.1 Toxic substances.
Label	6.1

14.4 Packing group

ADR, IMDG, IATA	III

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14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Warning: Toxic substances.
Danger code (Kemler):	60
EMS Number:	F-A,S-A
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5 kg
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
Transport category	2
Tunnel restriction code	E
IMDG	
Limited quantities (LQ)	5 kg
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
UN "Model Regulation":	UN2811, TOXIC SOLID, ORGANIC, N.O.S. (khellin), 6.1, III

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SECTION 15: Regulatory information

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

National regulations:

Information about limitation of use:
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

Breakdown regulations:

Waterhazard class:

15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

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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 MSDS: Department: Health, Safety and Environment

Contact: Herr Heine

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)
ICAO: International Civil Aviation Organisation
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

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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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
LD50*: Lethal Dose, 50 percent (Not relevant for classification)
LD50*: Lethal Concentration, 50 percent (Not relevant for classification)
Acute Tox. 3: Acute toxicity, Hazard Category 3
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

*** Data compared to the previous version altered.**