acc. to Safe Work Australia - Code of Practice

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53 date of compilation: 2021-08-18 Version: GHS 3.0 en

Replaces version of: 2022-12-09

Version: (GHS 2)

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

Product identifier 1.1

Identification of the substance Potassium hydroxide solution ROTI®Volum 0,1

mol/l - 0,1 N

Article number CN53

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

Relevant identified uses: Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for squirting or spraying. Do not use

for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private

purposes (household).

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone: +49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 e-mail: sicherheit@carlroth.de Website: www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment

sheet:

e-mail (competent person): sicherheit@carlroth.de

Emergency telephone number 1.4

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 West- mead, NSW	131126	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.16	Substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.2	Skin corrosion/irritation	1A	Skin Corr. 1A	H314
3.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16

Australia (en) Page 1 / 14



Revision: 2023-01-19

acc. to Safe Work Australia - Code of Practice

ROTH

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

Labelling

Signal word Danger

Pictograms

GHS05



Hazard statements

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

Precautionary statements

Precautionary statements - prevention

P260 Do not breathe dusts or mists P280 Wear eye protection/face protection

Precautionary statements - response

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

P390 Absorb spillage to prevent material damage

Precautionary statements - disposal

P501 Dispose of contents/container to industrial combustion plant

Hazardous ingredients for labelling: Potassium hydroxide

2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Australia (en) Page 2 / 14

acc. to Safe Work Australia - Code of Practice



Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53

Description of the mixture

Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Potassium hydroxide	CAS No 1310-58-3	10 - 11	Met. Corr. 1 / H290 Acute Tox. 4 / H302 Skin Corr. 1A / H314 Eye Dam. 1 / H318		

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

4.2 Most important symptoms and effects, both acute and delayed

Corrosion, Risk of blindness, Gastric perforation, Risk of serious damage to eyes

4.3 Indication of any immediate medical attention and special treatment needed none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO_2)

Unsuitable extinguishing media

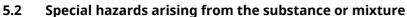
water jet

Australia (en) Page 3 / 14

acc. to Safe Work Australia - Code of Practice

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53



Non-combustible.



breathe vapour/spray.

Keep away from drains, surface and ground water.

Advice on how to contain a spill

Covering of drains.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

Precautions for safe handling 7.1

Handle and open container with care. Clear contaminated areas thoroughly.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

Keep only in original container.

Incompatible substances or mixtures

Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3

No information available.

Australia (en) Page 4 / 14



5.3 **Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not

6.2 **Environmental precautions**

Methods and material for containment and cleaning up 6.3

Advice on how to clean up a spill

Other information relating to spills and releases

Place in appropriate containers for disposal.

7.2 Conditions for safe storage, including any incompatibilities

Observe hints for combined storage.

Specific end use(s)

acc. to Safe Work Australia - Code of Practice



article number: CN53



SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
AU	potassium hydroxide	1310-58- 3	WES						2		WES

Notation

Ceiling-C STFI

Ceiling value is a limit value above which exposure should not occur

Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified) **TWA**

Relevant DNFI's of components of the mixture

Refevant Divies	Relevante DAZES of components of the mixture						
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time	
Potassium hydrox- ide	1310-58-3	DNEL	1 mg/m³	human, inhalat- ory	worker (industry)	chronic - local ef- fects	

8.2 **Exposure controls**

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection. Wear face protection.

Skin protection





hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

type of material

NBR (Nitrile rubber)

Page 5 / 14 Australia (en)

acc. to Safe Work Australia - Code of Practice

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N



article number: CN53

material thickness

0,3 mm

breakthrough times of the glove material

>480 minutes (permeation: level 6)

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection





Respiratory protection necessary at: Aerosol or mist formation. P2 (filters at least 94 % of airborne particles, colour code: White). Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties 9.1

Physical state

Colour colourless - clear

Odour odourless

Melting point/freezing point not determined

Boiling point or initial boiling point and boiling

range

not determined

non-combustible **Flammability** Lower and upper explosion limit not determined not determined Flash point not determined Auto-ignition temperature not relevant Decomposition temperature

pH (value) >13 (20 °C) not determined

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

Kinematic viscosity

Partition coefficient n-octanol/water (log value): not relevant (inorganic)

not determined Vapour pressure

Australia (en) Page 6 / 14

acc. to Safe Work Australia - Code of Practice

ROTH

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53

Density and/or relative density

Density 1.02 g/_{cm³} at 20 °C

Relative vapour density information on this property is not available

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard

classes:

Corrosive to metals category 1: corrosive to metals

Other safety characteristics:

Miscibility completely miscible with water

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong acid, Ammonium compounds, Azides, Alkaline earth metal, Halogenated hydrocarbons, Hydrocarbons, Metals, Strong oxidiser, Phosphorus

Dangerous/dangerous reactions with: Metals (due to the release of hydrogen in an acid/alkaline medium),

=> Explosion risk

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

aluminium, different metals, zinc, tin

Release of flammable materials with

Metals, Light metals (due to the release of hydrogen in an acid/alkaline medium)

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

Australia (en) Page 7 / 14

acc. to Safe Work Australia - Code of Practice

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53



SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4. May be harmful if swallowed.

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Potassium hydroxide	1310-58-3	oral	333 ^{mg} / _{kg}

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Potassium hydroxide	1310-58-3	oral	LD50	333 ^{mg} / _{kg}	rat

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Australia (en) Page 8 / 14

acc. to Safe Work Australia - Code of Practice

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53

If swallowed

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

• If in eyes

causes burns, Causes serious eye damage, risk of blindness

If inhaled

Data are not available.

• If on skin

causes severe burns, causes poorly healing wounds

Other information

none

11.2 Endocrine disrupting properties

None of the ingredients are listed.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

Australia (en) Page 9 / 14

acc. to Safe Work Australia - Code of Practice



Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H8 Corrosives

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

UN RTDG UN

1814

IMDG-Code UN 1814

ICAO-TI UN 1814

14.2 UN proper shipping name

UN RTDG POTASSIUM HYDROXIDE SOLUTION

IMDG-Code POTASSIUM HYDROXIDE SOLUTION

ICAO-TI Potassium hydroxide solution

14.3 Transport hazard class(es)

UN RTDG 8
IMDG-Code 8

ICAO-TI 8

14.4 Packing group

UN RTDG II
IMDG-Code II
ICAO-TI II

14.5 Environmental hazards non-environmentally hazardous acc. to the dan-

gerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport informationNational regulationsAdditional information(UN RTDG)

UN number 1814
Class 8
Packing group II
Danger label(s) 8

Australia (en) Page 10 / 14

acc. to Safe Work Australia - Code of Practice

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53



Special provisions (SP)

UN RTDG

Excepted quantities (EQ)

UN RTDG

Limited quantities (LQ)

UN RTDG

Emergency Action Code 2R

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name POTASSIUM HYDROXIDE SOLUTION

Particulars in the shipper's declaration UN1814, POTASSIUM HYDROXIDE SOLUTION, 8,

II

Marine pollutant Danger label(s) 8



Special provisions (SP)

Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L

EmS F-A, S-B

Stowage category A

Segregation group 18 - Alkalis

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name Potassium hydroxide solution

Particulars in the shipper's declaration UN1814, Potassium hydroxide solution, 8, II

Danger label(s) 8



Special provisions (SP) A3

Excepted quantities (EQ) E2

Limited quantities (LQ) 0,5 L

Australia (en) Page 11 / 14

acc. to Safe Work Australia - Code of Practice

Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53



SECTION 15: Regulatory information

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

There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

All ingredients are listed or exempt from listing.

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed as "ACTIVE"

Legend

Australian Inventory of Industrial Chemicals Chemical Inventory and Control Regulation List of Existing and New Chemical Substances (CSCL-ENCS)

CSCL-ENCS DSL ECSI IECSC

Domestic Substances List (DSL)

EC Substance Inventory (EINECS, ELINCS, NLP)
Inventory of Existing Chemical Substances Produced or Imported in China National Inventory of Chemical Substances

Korea Existing Chemicals Inventory
New Zealand Inventory of Chemicals
Philippine Inventory of Chemicals and Chemical Substances (PICCS)

REACH Reg. REACH registered substances
TCSI Taiwan Chemical Substance Inventory

TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

Australia (en) Page 12 / 14

acc. to Safe Work Australia - Code of Practice



article number: CN53



SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
14.8		Emergency Action Code: 2R	yes
15.1		National inventories: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
Met. Corr.	Substance or mixture corrosive to metals
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit

Australia (en) Page 13 / 14

acc. to Safe Work Australia - Code of Practice



Potassium hydroxide solution ROTI®Volum 0,1 mol/l - 0,1 N

article number: CN53

Abbr.	Descriptions of used abbreviations
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Australia (en) Page 14 / 14