

Trade name: CO2 ABSORBER (L)**Product no.:** 630-00999**Current version :** 3.0.0, issued: 22.03.2022**Replaced version:** 3.0.0, issued: 04.01.2022**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name

CO2 ABSORBER (L)**1.2 Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses of the substance or mixture**

General chemical processes

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet**Address**Shimadzu Europa GmbH
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Information provided by / telephone

Tel.: +49 (0)203 - 7687-0

Advice on Safety Data Sheet

sdb_info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

Eye Dam. 1; H318

Skin Irrit. 2; H315

STOT RE 2; H373

STOT SE 3; H335

Classification information

Classification and labelling with respect to corrosivity and irritation to skin are based on toxicological studies performed on the product (mixture).

Classification and labelling with respect to Serious eye damage/eye irritation are based on toxicological studies performed on the product (mixture).

Classification and labelling with respect to specific target organ toxicity (single exposure) are based on toxicological studies performed on the product (mixture).

Classification and labelling with respect to specific target organ toxicity (repeated exposure) are based on toxicological studies performed on the product (mixture).

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)****Hazard pictograms**

GHS05



GHS07



GHS08

Signal word

Danger

Hazardous component(s) to be indicated on label:

CALCIUM DIHYDROXIDE

Hazard statement(s)

H315

Causes skin irritation.

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H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure
Precautionary statement(s)	
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable. The product is not a substance.

3.2 Mixtures**Hazardous ingredients**

No	Substance name	Classification (EC) 1272/2008 (CLP)	Additional information	
	CAS / EC / Index / REACH no		Concentration	%
1	CALCIUM DIHYDROXIDE			
	1305-62-0 215-137-3 - -	Eye Irrit. 2; H319 Skin Irrit. 2; H315 STOT SE 3; H335	>= 70.00 - < 90.00	wt%
2	potassium hydroxide			
	1310-58-3 215-181-3 019-002-00-8 -	Acute Tox. 4*; H302 Skin Corr. 1A; H314	< 2.50	wt%
3	sodium hydroxide			
	1310-73-2 215-185-5 011-002-00-6 -	Skin Corr. 1A; H314 Eye Dam. 1; H318	< 2.50	wt%
4	SILICON DIOXIDE (AMORPHOUS)			
	112926-00-8 231-545-4 - -	-	< 2.50	wt%

Full Text for all H-phrases and EUH-phrases: pls. see section 16
 (*, **, ***, ****) Detailed explanation pls. refer to CLP regulation No. 1272/2008, annex VI, 1.2

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
2	-	Skin Irrit. 2; H315: C >= 0.5% Eye Irrit. 2; H319: C >= 0.5% Skin Corr. 1B; H314: C >= 2% Skin Corr. 1A; H314: C >= 5%	-	-
3	-	Eye Irrit. 2; H319: C >= 0.5% Skin Irrit. 2; H315: C >= 0.5% Skin Corr. 1B; H314: C >= 2% Skin Corr. 1A; H314: C >= 5%	-	-

SECTION 4: First aid measures**4.1 Description of first aid measures****General information**

In case of accident or if you feel unwell, seek medical advice immediately. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. If the patient is likely to become unconscious, place and transport in stable sideways position.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air. Irregular breathing/no breathing: artificial respiration. In case of persisting adverse effects consult a physician.

After skin contact

Wash off immediately with soap and water. Get medical attention if pain still persists.

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Separate eyelids, wash the eyes thoroughly with water (15 min.). Seek medical assistance.

After ingestion

Call a doctor immediately. Do not induce vomiting. Rinse out mouth and give plenty of water to drink. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

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**

Carbon dioxide; ABC powder; Foam; Water spray jet

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixture

When heating or in case of fire formation of toxic gases.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up

Collect mechanically. When collected, handle material as described under the section heading "Disposal considerations".

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances.

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately. Wash hands before breaks and after work. Provide eye wash fountain in work area. Have emergency shower available. Do not inhale dust.

Advice on protection against fire and explosion

No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels

Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original.

Incompatible products

None known

7.3 Specific end use(s)

No data available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	CALCIUM DIHYDROXIDE	1305-62-0	215-137-3
	2017/164/EU		
	Calcium dihydroxide		
	WEL short-term (15 min reference period)	4 (Resp)	mg/m ³
	WEL long-term (8-hr TWA reference period)	1 (Resp)	mg/m ³
	List of approved workplace exposure limits (WELs) / EH40		
	Calcium hydroxide		
	WEL long-term (8-hr TWA reference period)	5	mg/m ³
	List of approved workplace exposure limits (WELs) / EH40		
	Calcium hydroxide (Respirable fraction)		
	WEL short-term (15 min reference period)	4	mg/m ³
	WEL long-term (8-hr TWA reference period)	1	mg/m ³
2	SILICON DIOXIDE (AMORPHOUS)	112926-00-8	231-545-4
	List of approved workplace exposure limits (WELs) / EH40		
	Silica, amorphous inhalable dust		
	WEL long-term (8-hr TWA reference period)	6	mg/m ³
	List of approved workplace exposure limits (WELs) / EH40		
	Silica, amorphous respirable dust		
	WEL long-term (8-hr TWA reference period)	2.4	mg/m ³
3	potassium hydroxide	1310-58-3	215-181-3
	List of approved workplace exposure limits (WELs) / EH40		
	Potassium hydroxide (as Cyanide)		
	WEL short-term (15 min reference period)	5	mg/m ³
	WEL long-term (8-hr TWA reference period)	1	mg/m ³
4	sodium hydroxide	1310-73-2	215-185-5
	List of approved workplace exposure limits (WELs) / EH40		
	Sodium hydroxide		
	WEL short-term (15 min reference period)	2	mg/m ³

8.2 Exposure controls

Appropriate engineering controls

No data available.

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection

Safety glasses with side protection shield (EN 166)

Hand protection

In case of intensive contact, wear protective gloves (EN 374). Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other

Normal chemical work clothing.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation	solid
Form/Colour	Pastilles white

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Odour	
No data available	
pH value	
No data available	
Boiling point / boiling range	
No data available	
Melting point/freezing point	
No data available	
Decomposition temperature	
No data available	
Flash point	
Not applicable	
Ignition temperature	
No data available	
Flammability	
No data available	
Lower explosion limit	
No data available	
Upper explosion limit	
No data available	
Vapour pressure	
No data available	
Relative vapour density	
No data available	
Relative density	
No data available	
Density	
No data available	
Solubility in water	
Comments	easily soluble
Solubility	
No data available	
Partition coefficient n-octanol/water (log value)	
No data available	
Viscosity	
No data available	
Particle characteristics	
No data available	

9.2 Other information

Other information	
No data available.	

SECTION 10: Stability and reactivity**10.1 Reactivity**

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

Decomposition at higher temperatures is possible.

10.4 Conditions to avoid

Protect from sun. Heat

10.5 Incompatible materials

strong oxidizing agents; Acids

10.6 Hazardous decomposition products

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Calcium oxide

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute oral toxicity (result of the ATE calculation for the mixture)	
No	Product Name
1	CO2 ABSORBER (L)
Comments	The result of the applied calculation method according to the European Regulation (EC) 1272/2008 (CLP), Paragraph 3.1.3.6, Part 3 of Annex I is outside the values that imply a classification / labelling of this mixture according to table 3.1.1 defining the respective categories (ATE oral > 2000 mg/kg).
Acute oral toxicity	
No data available	
Acute dermal toxicity	
No data available	
Acute inhalational toxicity	
No data available	
Skin corrosion/irritation	
No	Product Name
1	CO2 ABSORBER (L)
Evaluation	Irritation is possible.
Serious eye damage/irritation	
No	Product Name
1	CO2 ABSORBER (L)
Evaluation	Irritation is possible.
Respiratory or skin sensitisation	
No data available	
Germ cell mutagenicity	
No data available	
Reproduction toxicity	
No data available	
Carcinogenicity	
No data available	
STOT - single exposure	
No data available	
STOT - repeated exposure	
No data available	
Aspiration hazard	
No data available	
Symptoms related to the physical, chemical and toxicological characteristics	
Eye contact may cause mechanical irritation through dust particles. The product can cause skin and eye irritation.	
Delayed and immediate effects as well as chronic effects from short and long-term exposure	
Inhalation may lead to irritation of the respiratory tract.	

11.2 Information on other hazards**Endocrine disrupting properties**

No data available.

Other information

No data available.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish (acute)
No data available
Toxicity to fish (chronic)
No data available
Toxicity to Daphnia (acute)

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No data available

Toxicity to Daphnia (chronic)

No data available

Toxicity to algae (acute)

No data available

Toxicity to algae (chronic)

No data available

Bacteria 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

No data available.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

12.8 Other information**Other information**

Do not let enter the product into drains or waterways and do not store on public depositories.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information**14.1 Transport ADR/RID/ADN**

The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG

The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations**

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According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No 3

The product contains following substance(s) that are considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No	Substance name	CAS no.	EC no.	No
1	potassium hydroxide	1310-58-3	215-181-3	75
2	sodium hydroxide	1310-73-2	215-185-5	75

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This product is not subject to Part 1 or 2 of Annex I.

15.2 Chemical safety assessment

No data available.

SECTION 16: Other information**Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H302

Harmful if swallowed.

H314

Causes severe skin burns and eye damage.

H319

Causes serious eye irritation.

Creation of the safety data sheet

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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