

1 Identification

· This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article except as noted in section 15 where components of the filter body are also considered. Section 15 includes REACH and Proposition 65 warnings regarding the presence of Lead in brass alloys in the fittings or fitting plugs.

· **Product identifier:** Gas purifying filter

· **Trade name:** CRS ZPure™ CO2 Filter and CRS CO2 Filter

· **Part numbers:**

202212-B	202212RD-B-QC	202212-SS-QC	202213L-SS-QC	202213R-SS-QC	202RH2L-B-QC
202212-B-QC	202212RD-SS	202212XL-B	202213M-SS	202213RXL-B	202RH2L-SS-QC
202212D-B	202212RD-SS-QC	202212XL-B-QC	202213M-SS-QC	202213RXL-B-QC	202RH2-SS-QC
202212D-B-QC	202212RL-B	202212XL-SS	202213R-B	202213RXL-SS	202RH2XL-B-QC
202212D-SS	202212RL-B-QC	202212XL-SS-QC	202213R-B-QC	202213RXL-SS-QC	202RH2XL-SS-QC
202212D-SS-QC	202212RL-SS	202213-B	202213RD-B	202213-SS	202350-B
202212L-B	202212RL-SS-QC	202213-B-QC	202213RD-B-QC	202213-SS-QC	202350-SS
202212L-B-QC	202212R-SS	202213D-B	202213RD-SS	202213XL-B	202352-B
202212L-SS	202212R-SS-QC	202213D-B-QC	202213RD-SS-QC	202213XL-B-QC	202352-SS
202212L-SS-QC	202212RXL-B	202213D-SS	202213RL-B	202213XL-SS	991098
202212M-V	202212RXL-B-QC	202213D-SS-QC	202213RL-B-QC	202213XL-SS-QC	
202212R-B	202212RXL-SS	202213L-B	202213RL-SS	202RH2-B-QC	
202212R-B-QC	202212RXL-SS-QC	202213L-B-QC	202213RL-SS-QC	202RH2D-B-QC	
202212RD-B	202212-SS	202213L-SS-QC	202213R-SS	202RH2D-SS-QC	

· **SDS number:** 991098

· **Application of the substance / the mixture** Purifying gas.

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Chromatography Research Supplies, Inc.
2601 Technology Drive
Louisville, KY 40299 USA
sds@chromres.com

· **Information department:** Product safety department

· **Emergency telephone number:**

From U.S.A., Canada, Puerto Rico and U.S. Virgin Islands
+1-502-491-6300 8 am - 5 pm East Coast U.S. Time
+1-800-255-3924 ChemTel (24 Hours) Contract Number MIS3660977

From Outside the U.S.A., Canada, Puerto Rico or U.S. Virgin Islands

+01-813-248-0585 ChemTel (24 Hours)

Additional In-Country numbers:

China: 400-120-0751; Brazil: 0-800-591-6042; India: 000-800-100-4086; Mexico: 01-800-099-0731.

2 Hazard(s) identification

· **Classification of the substance or mixture**



GHS05

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

· **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· Hazard pictograms



GHS05

· Signal word *Danger*

· Hazard-determining components of labeling:

Sodium hydroxide

· Hazard statements

H314 Causes severe skin burns and eye damage.

· Precautionary statements

*Do not breathe dusts or mists.**Wash thoroughly after handling.**Wear protective gloves/protective clothing/eye protection/face protection.**If swallowed: Rinse mouth. Do NOT induce vomiting.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Immediately call a poison center/doctor.**Specific treatment (see on this label).**Wash contaminated clothing before reuse.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

· Classification system:

· NFPA ratings (scale 0 - 4)

*Health = 3**Fire = 0**Reactivity = 0*

· HMIS-ratings (scale 0 - 4)

*Health = 3**Fire = 0**Reactivity = 0*

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: *Mixtures*· Description: *Mixture of the substances listed below with nonhazardous additions.*

· Dangerous components:

1310-73-2	Sodium hydroxide	☠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	60-90%
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· **Additional Components**

1318-00-9	Non-fibrous silicate	5-15%
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4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

1310-73-2	Sodium hydroxide	0.5 mg/m ³
1318-00-9	Non-fibrous silicate	32 mg/m ³

· **PAC-2:**

1310-73-2	Sodium hydroxide	5 mg/m ³
1318-00-9	Non-fibrous silicate	360 mg/m ³

· **PAC-3:**

1310-73-2	Sodium hydroxide	50 mg/m ³
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1318-00-9 Non-fibrous silicate

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2,200 mg/m³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - Do not open cartridge.
 - Thorough dedusting.
 - Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

1310-73-2 Sodium hydroxide

PEL	Long-term value: 2 mg/m ³
REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· **Material of gloves**

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Granulate
Color: According to product specification

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: >999 °C (>1,830.2 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.
Upper: Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

Water: Partly soluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

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· Solvent content:	
VOC content:	0.00 %
· Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

1310-73-2 Sodium hydroxide

Oral	LD50	2,000 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*
- **Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

14 Transport information

- | | |
|-------------------------------------|---|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | UN1823 |
| · UN proper shipping name | |
| · DOT | Sodium hydroxide, solid mixture |
| · ADR | 1823 SODIUM HYDROXIDE, SOLID mixture |
| · IMDG, IATA | SODIUM HYDROXIDE, SOLID mixture |
| · Transport hazard class(es) | |
| · DOT | |
| |  |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| | |
| · ADR, IMDG, IATA | |
| |  |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | II |

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· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Alkalis
· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" SGG1-acids
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 15 kg On cargo aircraft only: 50 kg
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· IATA	
· Remarks:	Quantity limitations On passenger aircraft: 15 kg On cargo aircraft only: 50 kg
· UN "Model Regulation":	UN 1823 SODIUM HYDROXIDE, SOLID MIXTURE, 8, II

15 Regulatory information

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

REACH Notification: In conformance to REACH Regulation (EC) No 1907/2006 of the European Parliament and of the Council, this is notification that purifiers made by CRS include components machined from copper alloys containing lead (Brass) above the 0.1% w/w threshold, where it is an integral part of the Article. Included products are the fittings and / or fitting plugs. Copper alloys such as brass in it's solid form and under normal conditions do not present an inhalation, ingestion or contact health hazard of the regulated substance. Operations such as welding, excessive heating or dust generating activities, such as machining, may create a health hazard. Under normal use, CRS' products are not designed or anticipated to release these regulated substances.

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

1310-73-2 | Sodium hydroxide

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· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**



WARNING: This product can expose you to chemicals including quartz (SiO₂), which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Sodium hydroxide

· **Hazard statements**

H314 Causes severe skin burns and eye damage.

· **Precautionary statements**

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Store locked up.

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Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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 SDS:** Product safety department

· **Contact:** Product Safety Department

· **Date of preparation / last revision** 08/19/2019 / -

· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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