

*** 1 Identification**

- **Product identifier:**
Gas purifying filter
This product is considered an article. This Material Safety Data Sheet is written based on the encapsulated substance or mixture in this article.
- **Trade name:** CRS AFS Purifier III, Moisture
- **Article number:** 202905, 202906, 202935, 202955
- **SDS number:** 991096
- **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**



Carc. 1A H350 May cause cancer.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** Danger
- **Hazard-determining components of labeling:**
Quartz (SiO2)
- **Hazard statements**
H350 May cause cancer.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/09/2019

Reviewed on 08/09/2019

Trade name: CRS AFS Purifier III, Moisture

(Contd. of page 1)

Store locked up.

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

· **Classification system:**· **NFPA ratings (scale 0 - 4)**· **HMIS-ratings (scale 0 - 4)**

| | | |
|------------|---|----------------|
| HEALTH | 0 | Health = *0 |
| FIRE | 0 | Fire = 0 |
| REACTIVITY | 0 | Reactivity = 0 |

· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Description:** Mixture of the substances listed below with nonhazardous additions.· **Dangerous components:**

| | | | |
|------------|-----------------------------------|----------------|-------|
| 14808-60-7 | Quartz (SiO ₂) | Carc. 1A, H350 | <2% |
| 10034-96-5 | Manganese(II)-sulfate-Monohydrate | | <0.1% |

· **Additional Components**

| | | |
|-----------|--------------------------------|--------|
| 1318-02-1 | Zeolite | 60-90% |
| 1327-43-1 | Magnesium aluminosilicate clay | 5-15% |

4 First-aid measures

· **Description of first aid measures**· **After inhalation:** Supply fresh air; consult doctor in case of complaints.· **After skin contact:** Generally the product does not irritate the skin.· **After eye contact:** Rinse opened eye for several minutes under running water.· **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** No further relevant information available.· **Advice for firefighters**· **Protective equipment:** No special measures required.US
(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/09/2019

Reviewed on 08/09/2019

Trade name: CRS AFS Purifier III, Moisture

(Contd. of page 2)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
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:**

| | | |
|------------|-----------------------------------|-------------------------|
| 14808-60-7 | Quartz (SiO ₂) | 0.075 mg/m ³ |
| 10034-96-5 | Manganese(II)-sulfate-Monohydrate | 9.2 mg/m ³ |

- **PAC-2:**

| | | |
|------------|-----------------------------------|----------------------|
| 14808-60-7 | Quartz (SiO ₂) | 33 mg/m ³ |
| 10034-96-5 | Manganese(II)-sulfate-Monohydrate | 15 mg/m ³ |

- **PAC-3:**

| | | |
|------------|-----------------------------------|-----------------------|
| 14808-60-7 | Quartz (SiO ₂) | 200 mg/m ³ |
| 10034-96-5 | Manganese(II)-sulfate-Monohydrate | 90 mg/m ³ |

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - Do not open cartridge.
- 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:**

| | |
|---------------------------------------|--|
| 14808-60-7 Quartz (SiO ₂) | |
| PEL | Long-term value: 0.05* mg/m ³ *resp. dust; 30mg/m ³ /%SiO ₂ +2 |
| REL | Long-term value: 0.05* mg/m ³ *respirable dust; See Pocket Guide App. A |

(Contd. on page 4)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/09/2019

Reviewed on 08/09/2019

Trade name: CRS AFS Purifier III, Moisture

(Contd. of page 3)

| | |
|---|---|
| TLV | Long-term value: 0.025* mg/m ³ *as respirable fraction |
| 10034-96-5 Manganese(II)-sulfate-Monohydrate | |
| PEL | Ceiling limit value: 5 mg/m ³ as Mn |
| REL | Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn |
| TLV | Long-term value: 0.02* 0.1** mg/m ³ as Mn; *respirable **inhalable fraction |

· **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.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **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

· **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:** • Safety glasses with side shields

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Granulate

Color: Various colors

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Undetermined.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/09/2019

Reviewed on 08/09/2019

Trade name: CRS AFS Purifier III, Moisture

(Contd. of page 4)

| | |
|---|---|
| Boiling point/Boiling range: | Undetermined. |
| · 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: | Insoluble. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not applicable. |
| Kinematic: | Not applicable. |
| · 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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/09/2019

Reviewed on 08/09/2019

Trade name: CRS AFS Purifier III, Moisture

(Contd. of page 5)

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

- **Carcinogenic categories**

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

| | | |
|------------|----------------------------|---|
| 1318-02-1 | Zeolite | 3 |
| 14808-60-7 | Quartz (SiO ₂) | 1 |

- **NTP (National Toxicology Program)**

| | | |
|------------|----------------------------|---|
| 14808-60-7 | Quartz (SiO ₂) | K |
|------------|----------------------------|---|

- **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.

- **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.

- **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** Void

- **UN proper shipping name**

- **DOT, ADR, IMDG, IATA** Void

(Contd. on page 7)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/09/2019

Reviewed on 08/09/2019

Trade name: CRS AFS Purifier III, Moisture

(Contd. of page 6)

- | | |
|--|-----------------|
| · Transport hazard class(es) | |
| · DOT, ADR, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

15 Regulatory information

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

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

10034-96-5 | Manganese(II)-sulfate-Monohydrate

- **TSCA (Toxic Substances Control Act):**

1327-43-1 | Magnesium aluminosilicate clay

ACTIVE

14808-60-7 | Quartz (SiO₂)

ACTIVE

- **Hazardous Air Pollutants**

10034-96-5 | Manganese(II)-sulfate-Monohydrate

- **Proposition 65**



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

- **Chemicals known to cause cancer:**

14808-60-7 | Quartz (SiO₂)

- **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)**

10034-96-5 | Manganese(II)-sulfate-Monohydrate

D

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

14808-60-7 | Quartz (SiO₂)

A2

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/09/2019

Reviewed on 08/09/2019

Trade name: CRS AFS Purifier III, Moisture

(Contd. of page 7)

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

14808-60-7 Quartz (SiO₂)

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

· **Hazard pictograms**



GHS08

· **Signal word** Danger

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

Quartz (SiO₂)

· **Hazard statements**

H350 May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **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** 08/09/2019 / -

· **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)

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

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/09/2019

Reviewed on 08/09/2019

Trade name: CRS AFS Purifier III, Moisture

(Contd. of page 8)

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Carc. 1A: Carcinogenicity – Category 1A

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

US