



Safety Data Sheet

Copyright, 2018, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M Purification Inc. products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M Purification Inc., and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 23-0364-2 | Version Number: | 5.00 |
| Issue Date: | 10/22/18 | Supersedes Date: | 06/04/18 |

SECTION 1: Identification

1.1. Product identifier

Chem-Free Standard Media

Product Identification Numbers

MC-050, MC-10, MC-050P, MC-10P, 70-0200-9705-4, 70-0200-9708-8
7000050726

1.2. Recommended use and restrictions on use

Recommended use

Filtration Media

1.3. Supplier's details

| | |
|----------------------|---|
| MANUFACTURER: | 3M Purification Inc. |
| DIVISION: | Separation and Purification Sciences Div |
| ADDRESS: | 400 Research Parkway, Meriden, CT 06450-1018, USA |
| Telephone: | 1-888-3M HELPS (1-888-364-3577) |

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Carcinogenicity: Category 1A.

Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Health Hazard |

Pictograms

**Hazard Statements**

May cause cancer.

Causes damage to organs through prolonged or repeated exposure:
respiratory system |

Precautionary Statements**General:**

Keep out of reach of children.

Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:

IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

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

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---------------------|------------|--------------------------|
| Calcium Carbonate | 471-34-1 | 60 - 70 |
| Quartz Silica | 14808-60-7 | 20 - 30 Trade Secret * |
| Magnesium Oxide | 1309-48-4 | 3 - 7 |
| Magnesium Carbonate | 546-93-0 | 0.1 - 2 |
| Cadmium | 7440-43-9 | < 0.00006 Trade Secret * |

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures**Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|---------------------|-------------------|---------------|---|--------------------------------|
| Magnesium Oxide | 1309-48-4 | ACGIH | TWA(inhalable fraction):10 mg/m3 | A4: Not class. as human carcin |
| Magnesium Oxide | 1309-48-4 | OSHA | TWA(as total particulates):15 mg/m3 | |
| Quartz Silica | 14808-60-7 | ACGIH | TWA(respirable fraction):0.025 mg/m3 | A2: Suspected human carcin. |
| Quartz Silica | 14808-60-7 | OSHA | TWA Table Z-1(respirable):0.05 mg/m3;TWA Table Z-3(respirable):0.1 mg/m3 | |
| Limestone | 471-34-1 | OSHA | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 | |
| Magnesium Carbonate | 546-93-0 | OSHA | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 | |
| Cadmium | 7440-43-9 | ACGIH | TWA(as Cd):0.01 mg/m3 | A2: Suspected human carcin. |
| Cadmium | 7440-43-9 | OSHA | TWA(as dust):0.2 mg/m3;TWA(as fume):0.1 mg/m3;TWA:0.005 mg/m3;CEIL(as dust):0.6 mg/m3;CEIL(as fume):0.3 mg/m3 | 29 CFR 1910.1027 |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection

No chemical protective gloves are required.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| General Physical Form: | Solid |
| Specific Physical Form: | Coarse Powder |
| Odor, Color, Grade: | Odorless mixture of white powder and sand. |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>No Data Available</i> |
| Boiling Point | <i>No Data Available</i> |
| Flash Point | No flash point |
| Evaporation rate | <i>Not Applicable</i> |
| Flammability (solid, gas) | Not Classified |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapor Pressure | <i>Not Applicable</i> |
| Vapor Density | <i>Not Applicable</i> |
| Specific Gravity | <i>No Data Available</i> |
| Solubility in Water | Nil |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>Not Applicable</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | <i>Not Applicable</i> |

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids

10.6. Hazardous decomposition products

Substance

None known.

Condition

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye Contact:

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Silicosis: Signs/symptoms may include breathlessness, weakness, chest pain, persistent cough, increased amounts of sputum, and heart disease.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

| Ingredient | CAS No. | Class Description | Regulation |
|-----------------------|------------|--------------------------------|---|
| SILICA, CRYST AIRRESP | 14808-60-7 | Known human carcinogen | National Toxicology Program Carcinogens |
| Cadmium | 7440-43-9 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| Cadmium | 7440-43-9 | Known human carcinogen | National Toxicology Program Carcinogens |
| Cadmium | 7440-43-9 | Cancer hazard | OSHA Carcinogens |
| Quartz Silica | 14808-60-7 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

| Name | Route | Species | Value |
|-------------------|-----------|---------|--|
| Overall product | Dermal | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Calcium Carbonate | Dermal | Rat | LD50 > 2,000 mg/kg |

| | | | |
|---------------------|--------------------------------|------------------------|--|
| Calcium Carbonate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 3 mg/l |
| Calcium Carbonate | Ingestion | Rat | LD50 6,450 mg/kg |
| Quartz Silica | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Quartz Silica | Ingestion | | LD50 estimated to be > 5,000 mg/kg |
| Magnesium Oxide | Dermal | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Magnesium Oxide | Ingestion | Rat | LD50 3,870 mg/kg |
| Magnesium Carbonate | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Magnesium Carbonate | Ingestion | Mouse | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---------------------|------------------------|---------------------------|
| Calcium Carbonate | Rabbit | No significant irritation |
| Quartz Silica | Professional judgement | No significant irritation |
| Magnesium Oxide | Professional judgement | No significant irritation |
| Magnesium Carbonate | In vitro data | Minimal irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---------------------|---------|---------------------------|
| Calcium Carbonate | Rabbit | No significant irritation |
| Magnesium Carbonate | Rabbit | Mild irritant |

Skin Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

| Name | Route | Value |
|-----------------|----------|--|
| Quartz Silica | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Quartz Silica | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Magnesium Oxide | In Vitro | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|-----------------|---------------|------------------|--|
| Quartz Silica | Inhalation | Human and animal | Carcinogenic |
| Magnesium Oxide | Not Specified | Human and animal | Some positive data exist, but the data are not sufficient for classification |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|-------------------|-----------|--------------------------------|---------|---------------------|--------------------------------|
| Calcium Carbonate | Ingestion | Not classified for development | Rat | NOAEL 625 mg/kg/day | prematuring & during gestation |

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-------------------|------------|--------------------|----------------|---------|---------------------|-------------------|
| Calcium Carbonate | Inhalation | respiratory system | Not classified | Rat | NOAEL 0.812 mg/l | 90 minutes |
| Magnesium Oxide | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-------------------|------------|--------------------|--|---------|---------------------|-----------------------|
| Calcium Carbonate | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Quartz Silica | Inhalation | silicosis | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | occupational exposure |

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

Please contact the emergency numbers listed on the first page of the SDS for Transportation Information for this material.

SECTION 15: Regulatory information**15.1. US Federal Regulations**

Contact manufacturer for more information

EPCRA 311/312 Hazard Classifications:**Physical Hazards**

Not applicable

Health Hazards

Carcinogenicity

Specific target organ toxicity (single or repeated exposure)

15.2. State Regulations

Contact manufacturer for more information

California Proposition 65

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>Listing</u> |
|---|--------------------------|-----------------------|
| SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE) | None | Carcinogen |
| CADMIUM AND CADMIUM COMPOUNDS | 7440-43-9 | Carcinogen |

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact manufacturer for more information

15.4. International Regulations

Contact manufacturer for more information

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information**NFPA Hazard Classification**

Health: 1 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: *3 Flammability: 1 Physical Hazard: 0 Personal Protection: X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 23-0364-2 | Version Number: | 5.00 |
| Issue Date: | 10/22/18 | Supersedes Date: | 06/04/18 |

Reason for Reissue

Update to product identification numbers

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M Purification Inc. MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M Purification Inc. product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M Purification Inc. product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M Purification Inc. product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M Purification Inc. provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M Purification Inc. makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M Purification Inc.

3M Purification Inc. USA SDSs are available at www.3M.com