

# TECH LINE Coatings

## SAFETY DATA SHEET

### Section 1 – Identification

**Product Identifier:** MCS

**Other means of identification:** Not Available

**Part Number:** MCS

**Product Type:** Liquid

**Recommended Use:** Thermal Barrier

**Restrictions on Use:**

**Manufacturer / Supplier:**

Tech Line Coatings, Inc

26844 ADAMS AVE.

MURRIETA, CA 92562

USA

Phone 865-773-0599

Fax 865-773-0599

www.techlinecoatings.com

**Industrial Use Only**

**Keep out of reach of children.**

**Emergency Phone: N . America 1-800-535-5035**

**Intl.+1-352-323-3500**

### Section 2 – Hazards Identification

**OSHA status:** This material is considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200)

**Classification of the substance or mixture:** Acute Toxicity (Oral) – category 4 (Dermal) category 4  
Carcinogenicity category 1A

**Signal Word:** Warning

**Hazard Statements:** Harmful if swallowed. Harmful if in contact with skin. May cause cancer



**Symbols:**

**Precautionary statements**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke while using this product. Wash hands thoroughly after handling.

**Response:** If exposed or concerned: get medical attention. If Swallowed: Immediately call a poison center or a physician. Rinse mouth.

**Storage:** Store locked up

**Disposal:** Dispose with container and contents in accordance with all Local, State, National and international standards.

**Hazards not otherwise classified:** None known

### Section 3 – Composition / Information On Ingredients

**Substance/mixture:** Substance

**Other means of identification:** Not available

**Product Code:** MCS

| Component Name              | Common Name / Synonyms                | CAS#       | % of Weight |
|-----------------------------|---------------------------------------|------------|-------------|
| Crystalline Silica (Quartz) | Silica                                | 14808-60-7 | 15-25%      |
| Water                       |                                       | 7732-18-15 | 35-50%      |
| Phosphoric Acid             | H3O4P                                 | 7664-38-2  | <20%        |
| Chromium Trioxide           | Chromic Anhydride, Chromium(VI) oxide | 1333-82-0  | < 3.4%      |

Components not listed above are non-hazardous.

Testing to US Department of Transportation(DOT) and International Dangerous Goods codes show that MCS is not regulated for shipping.

## **Section 4 – First Aid Measures**

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### **Description of necessary First Aid measures:**

#### **General advise:**

- Consult a physician. Show this Safety Data Sheet to the doctor in attendance. Move out of dangerous area.

#### **After EYE Contact:**

- Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

#### **After SKIN Contact:**

- Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

#### **After INHALATION:**

- Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### **After SWALLOWING:**

- Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### **Most important symptoms/effects, acute and delayed**

- Inhalation:** Harmful if inhaled.  
**Ingestion:** Harmful if swallowed.  
**Skin contact:** No known significant effects or critical hazards.  
**Eye contact:** No known significant effects or critical hazards.

#### **Over-exposure signs/symptoms**

- Eye contact:** No specific data  
**Inhalation:** Harmful if inhaled.  
**Ingestion:** Harmful if swallowed  
**Skin Contact:** No known significant effects or critical hazard.

#### **Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician:** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled

**Specific treatments:** No specific treatment

**Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**See section 11 for additional information**

## **Section 5 – Fire Fighting Measures**

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Not Flammable

### **Extinguishing Media:**

- Use an extinguishing agent suitable for the surrounding fire.

### **Unsuitable Media:**

- None Known

### **Special Fire Fighting Procedures:**

- Use full protective equipment, including self contained breathing apparatus

### **Unusual Fire And Explosion Hazards:**

- During emergency conditions, overexposure to decomposition products may cause a health hazard.

### **Specific Hazards Arising from the Chemical:**

- Water runoff can cause environmental damage, dike and collect water used to fight fire.
- In a fire or if heated, a pressure increase will occur and the container may burst

### **Decomposition products may include the following materials:**

- metal oxide/oxides
- phosphorus oxides

### **Special protective actions for fire-fighters :**

- Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

### **Special protective equipment for fire-fighters:**

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## **Section 6 – Accidental Release Measures**

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### **Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment

**For emergency responders :** If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non emergency personnel".

**Environmental precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### **Methods and materials for containment and cleaning up:**

**Small spill:** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor

**Large spill:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

### **Additional Information:**

- See Section 7 for safe handling information.
- See Section 8 for PPE information
- See Section 13 for disposal information

## Section 7 – Handling And Storage

### Precautions for safe handling

**Protective measures:** Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities:** Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

**Conditions for safe storage:** Store at 55-90°F (13-32°C).

### SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

| Component                | ACGIH TLV                     | OSHA PEL  | NIOSH REL                                |
|--------------------------|-------------------------------|---|--|
| Silica                   | .025 mg/m <sup>3</sup>        | 10mg/m <sup>3</sup> ,(%SiO <sub>2</sub> +2 as dust)<br>30 mg/m <sup>3</sup> %SiO <sub>2</sub> +2 (total dust) | 0.05 mg/m <sup>3</sup> (respirable dust) |
| Phosphoric Acid          | 1 mg/m <sup>3</sup>           | 1 mg/m <sup>3</sup>   | 1 mg/m <sup>3</sup>                      |
| Chromium(VI) Trioxide    | 0.5 mg/m <sup>3</sup>         | 0.005mg/m <sup>3</sup>  | 0.0002 mg/m <sup>3</sup>                 |
| Manganese Ferrite Spinel | 0.1 mg/m <sup>3</sup> (as Mn) | 0.02 mg/m <sup>3</sup> (as Mn)  | 5 mg/m <sup>3</sup> (as Mn)              |
| Nickel                   | 1.5 mg/m <sup>3</sup>         | 1 mg/m <sup>3</sup>   | 0.015 mg/m <sup>3</sup>                  |
| Cobalt                   | 0.05 mg/m <sup>3</sup>        | 0.1 mg/m <sup>3</sup>   | 0.05 mg/m <sup>3</sup>                   |

**Appropriate engineering controls:** If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits

**Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels

### Individual protection measures:

#### **Hygiene measures :**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Eye/face protection:**

Safety eye wear complying with an approved standard should be used to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### **Skin protection:**

**Hand protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

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|   |                                 |
|---|---------------------------------|
| Form :  | liquid                          |
| Color :                                       | Grey green                      |
| Odor :  | Slightly musty smell to no odor |
| Odor Threshold:                               | Not Established                 |
| pH :  | 1.8 to 2.6                      |
| Melting point / Freezing point:               | Not Established                 |
| Initial boiling point :                       | Not Established                 |
| Flash point :                                 | > 212° F (Water based)          |
| Evaporation Rate:                             | Not Established                 |
| Upper/lower flammability or explosive limits: | Not Established                 |
| Vapor pressure                                | Not Established                 |
| Vapor density                                 | Not Established                 |
| Relative density                              | Not Established                 |
| Solubility(ies)                               | Water: somewhat soluble         |
| Partition coefficient: n-octanol/water        | Not Established                 |
| Auto-ignition temperature                     | Not Established                 |
| Decomposition temperature                     | Not Established                 |
| Viscosity                                     | Not Established                 |
| Total VOC                                     | 0 lbs/gal                       |

## **SECTION 10 STABILITY AND REACTIVITY**

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Reactivity No data available on mixture

|   |  |
|---|--|
| Chemical stability  | Stable   |
| Possibility of hazardous reactions                                | No data available on mixture   |
| Conditions to avoid (e.g., static discharge, shock, or vibration) | No data available on mixture   |
| Incompatible materials  | Magnesium, strong alkali's, strong reducing agents, strong oxidizing agents.           |
| Hazardous decomposition products                                  | Under normal conditions of storage and use, hazardous products should not be produced. |

## **SECTION 11 TOXICOLOGICAL INFORMATION**

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### **Classification**

| <b>Product/ingredient name</b> | <b>OSHA</b> | <b>IARC</b> | <b>NTP</b>                            |
|--------------------------------|-------------|-------------|---------------------------------------|
| <b>Chromium (VI) trioxide</b>  | <b>+</b>    | <b>1</b>    | <b>Known to be a human carcinogen</b> |

**Carcinogenicity:** Not available.

**Mutagenicity:** Not available.

**Teratogenicity:** Not available

**Reproductive toxicity:** Not available.

**Specific target organ toxicity (single exposure):** Not available

**Specific target organ toxicity (repeated exposure):** Not available

**Aspiration hazard:** Not available

**Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation.**

**Inhalation :** No known significant effects or critical hazards.

**Ingestion :** Toxic if swallowed.

**Skin contact :** No known significant effects or critical hazards.

**Eye contact :** No known significant effects or critical hazards.

### **Symptoms related to the physical , chemical and toxicological characteristics**

**Eye contact:** No specific data

**Inhalation:** No specific data

**Skin contact:** No specific data

**Ingestion:** No specific data

### **Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure:**

**Potential immediate effects:** Not available.

**Potential delayed effects :** Not available.

**Long term exposure:**

**Potential immediate effects:** Not available.

**Potential delayed effects :** Not available.

**Potential chronic health effects:**

Not available

**General :** No known significant effects or critical hazards.

**Carcinogenicity :** May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity :** No known significant effects or critical hazards.

**Teratogenicity :** No known significant effects or critical hazards.

**Acute effects of exposure:**

**Inhalation:** Inhalation of dust may cause respiratory tract irritation. Symptoms of exposure may include cough, sore throat, nasal congestion, sneezing, wheezing, and shortness of breath.

**Ingestion:** Ingestion in an unlikely route of exposure. If dust is swallowed, it may irritate the mouth and throat.

**SECTION 11 TOXICOLOGICAL INFORMATION****Acute effects of exposure ( Crystalline Silica) :**

**Skin contact:** No adverse effects are expected.

**Eye contact:** Particulates may cause abrasive injury.

**Chronic effects:** Prolonged inhalation of respirable crystalline silica may cause lung disease, silicosis, lung cancer and other effects as indicated below.

**The method of exposure that can lead to the adverse health effects described below is inhalation.**

**A. SILICOSIS**

Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute:

Chronic or Ordinary Silicosis is the most common form of silicosis, and can occur after many years (10 to 20 or more) of prolonged repeated inhalation of relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability.

Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Complicated silicosis or PMF symptoms, if present, are shortness of breath and cough. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling.

Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pulmonale).

Accelerated Silicosis can occur with prolonged repeated inhalation of high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid.

Acute Silicosis can occur after the repeated inhalation of very high concentrations of respirable crystalline silica over a short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough, weakness and weight loss. Acute silicosis is fatal.

**IARC** - The International Agency for Research on Cancer ("IARC") concluded that "crystalline silica in the form of quartz or cristobalite dust is carcinogenic to humans (Group 1)". For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C, "A Review of Human Carcinogens: Arsenic, Metals, Fibres and Dusts " (2011). NTP classifies "Silica, Crystalline (respirable size)" as Known to be a human carcinogen.

**B.AUTOIMMUNE DISEASES**

Several studies have reported excess cases of several autoimmune disorders -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers.

**C. TUBERCULOSIS**

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to tuberculosis bacteria.

Individuals with chronic silicosis have a three-fold higher risk of contracting tuberculosis than similar individuals without silicosis.

**D. KIDNEY DISEASE** Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers. For additional information on the subject, the following may be consulted: "Kidney Disease and Silicosis", Nephron, Volume 85, pp. 14-19 (2000).

**E. NON-MALIGNANT RESPIRATORY DISEASES** The reader is referred to Section 3.5 of the NIOSH Special Hazard Review cited below for information concerning the association between exposure to crystalline silica and chronic bronchitis, emphysema and small airways disease. There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica, or the level of crystalline silica in the dust).

**SECTION 11 TOXICOLOGICAL INFORMATION**

Sources of information: The NIOSH Hazard Review - Occupational Effects of Occupational Exposure to Respirable Crystalline Silica published in April 2002 summarizes and discusses the medical and epidemiological literature on the health risks and diseases associated with occupational exposures to respirable crystalline silica. The NIOSH Hazard Review is available from NIOSH - Publications Dissemination, 4676 Columbia Parkway, Cincinnati, OH 45226, or through the NIOSH web site, [www.cdc.gov/niosh/topics/silica](http://www.cdc.gov/niosh/topics/silica), then click on the link "NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica". For a more recent review of the health effects of respirable crystalline silica, the reader may consult Fishman's Pulmonary Diseases and Disorders, Fourth Edition, Chapter 57. "Coal Workers' Lung Diseases and Silicosis". Finally, the US Occupational Safety and Health Administration (OSHA) published a summary of respirable crystalline silica health effects in connection with OSHA's Proposed Rule regarding occupational exposure to respirable crystalline silica. The summary was published in the September 12, 2013 Federal Register, which can be found at [www.federalregister.gov/articles/2013/09/12/2013-20997/occupational-exposure-to-respirablecrystallinesilica](http://www.federalregister.gov/articles/2013/09/12/2013-20997/occupational-exposure-to-respirablecrystallinesilica)

**Carcinogenicity**

Carcinogen Category 1A

**Information on the likely routes of exposure:** Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects :**

**Eye contact :** Contact with eyes may cause irritation.

**Inhalation :** Can cause lung cancer

**Skin contact :**No known significant effects or critical hazards

**Ingestion :** Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Skin contact:** No specific data

**Ingestion:** No specific data.

**Inhalation:** can cause irritation to the nose and throat. Symptoms may include runny nose, sneezing, coughing, itching and a burning sensation

**Eye contact :** Contact with eyes may cause irritation.

**General :** No known significant effects or critical hazards.

**Carcinogenicity :** May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity :** No known significant effects or critical hazards.

**Teratogenicity :** No known significant effects or critical hazards.

**Developmental effects :** No known significant effects or critical hazards.

**Fertility effects :** No known significant effects or critical hazards.

**Acute Toxicity**

|                   |                 |  |
|-------------------|-----------------|--|
| Phosphoric Acid   | Oral LD50       | LD50 Oral - rat – 1,530 mg/kg                              |
|                   | Inhalation LC50 | LC50 - rabbit – 5.337 mg/l Exposure time: 1 h              |
|                   | Dermal LD50     | LD50- rabbit – 1,260 mg/kg                                 |
| Chromium Trioxide | Oral LD50       | LD50 Oral - rat - male and female - 52 mg/kg               |
|                   | Inhalation LC50 | LC50 Inhalation - rat - male - 4 h - 217 mg/m <sup>3</sup> |
|                   | Dermal LD50     | LD50 Dermal - rabbit - male and female - 57 mg/kg          |
|                   | Oral LD50       | LD50 Oral - rat - > 10,000 mg/kg                           |

**Carcinogenicity**

IARC: 1 - Group 1: Carcinogenic to humans (Chromium trioxide)  
3 - Group 3: Not classifiable as to its carcinogenicity to humans (Chromium (III) oxide)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Known to be human carcinogen (Chromium trioxide)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

This product contains a component that has been reported to be carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

**Numerical measures of toxicity**

**Acute toxicity estimates:**

|              |                  |
|--------------|------------------|
| <b>Route</b> | <b>ATE value</b> |
| Oral         | 250.7 mg/kg      |



## SECTION 12 ECOLOGICAL INFORMATION

**General Comments:** Do not allow material to be released into the environment without proper governmental permits

### Environmental Toxicity:

Phosphoric Acid

|   |  |
|---|--|
| Toxicity to fish                                    | LC50: 75.1 mg/l Exposure time: 96 h Species: Oryzias latipes (Japanese medaka)           |
| Toxicity to daphnia and other aquatic invertebrates | EC50: 376 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)                   |
| Toxicity to algae                                   | EC50: 32 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) |

Chromium Trioxide

|   |  |
|---|--|
| Toxicity to fish                                    | LC50 - Tilapia mossambica - 21.05 - 141.38 mg/l - 96.0 h<br>LC0 - Leuciscus idus (Golden orfe) - 100 mg/l - 48.0 h |
| Toxicity to daphnia and other aquatic invertebrates | EC50 - Daphnia magna (Water flea) - 0.8 mg/l - 48 h  |

**Persistence and degradability:** no data available

### Bioaccumulative potential:

| Product/ingredient name | Log Pow | BCF | Potential |
|-------------------------|---------|-----|-----------|
| Water                   | -1.38   | -   | low       |

**Mobility in soil:** no data available

**Other adverse effects:** no data available

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste Disposal Method:

Disposal should be made in accordance with federal, state and local regulations. Recovered non-usable material is a RCRA hazardous waste. Treatment, storage, transportation and disposal must be in accordance with EPA and State regulation under the authority of the Resource Conservation and Recovery Act (RCRA) 40 CFR parts 260-271. A competent and properly permitted contractor should do appropriate disposal.

## SECTION 14 TRANSPORTATION INFORMATION

### Non-Hazardous for Shipping:

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage

## SECTION 15 REGULATIONS

### Other Regulations, Limitations, and Prohibitive Regulations:

#### International Inventories

**All of the components in this product are on or exempt from the following inventories:**

USA (TSCA), CANADA (DSL / NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL), China (IECSC), Japan (ENCS), Philippines (PICCS).

#### International Inventory Legend

TSCA: US - Toxic Substance Control Act  
DSL: Canada - Domestic Substance List  
NDSL: Canada - Non-Domestic Substance List  
IECSC: China - Inventory of Existing Chemical Substances China  
EINECS: EU Inventory of Existing Commercial Chemical Substances  
ELINCS: EU List of Notified Chemical Substances  
ECL: Korea - Existing Chemicals List  
AICS: Australia - Inventory of Chemical Substances  
ENCS: Japan - Existing and New Chemical Substances  
PICCS: Phillipines - Inventory of Chemicals and Chemical Substances

#### U.S Federal Regulations

**TSCA 6 final risk management: Chromium(VI) trioxide**

**TSCA 8(a) CDR Exempt/Partial exemption: Not determined**  
**TSCA 12(b) annual exportation notification:chromium VI trioxide**  
**Clean Air Act Section 602 Class 1 Substances: Not Listed**  
**Clean Air Act Section 602 Class 2 Substances: Not Listed**  
**DEA List I Chemicals (Precursor Chemicals): Not Listed**  
**DEA List II Chemicals(Essential Chemicals): Not Listed**  
**Clean Water Act (CWA) 307: Chromium (VI) Trioxide;**  
**Clean Water Act (CWA) 311 : Phosphoric Acid**  
**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs):**

**U.S. Regulations:**

| Component                   | SARA 302 | SARA 311 / 312 | SARA 313 | Massachusetts RTK | Pennsylvania RTK | New Jersey RTK | California Prop 65 list |
|-----------------------------|----------|----------------|----------|-------------------|------------------|----------------|-------------------------|
| Crystalline Silica( quartz) | No       |                | No       | Yes               | Yes              |                | Yes                     |
| Phosphoric Acid             | No       | Yes            | No       | Yes               | Yes              | Yes            | No                      |
| Chromium Trioxide           | No       | Yes            | Yes      | Yes               | Yes              | Yes            | Yes                     |
| Nickel                      | Yes      |                | Yes      | Yes               | Yes              | Yes            | Yes                     |
| Cobalt                      | Yes      | Yes            |          | Yes               | Yes              | Yes            | Yes                     |
| Manganese Ferrite Spinel    | No       | No             | Yes      | Yes               | Yes              | Yes            | Yes                     |

**SARA 311 / 312 Hazards:** Acute Health Hazard, Chronic Health Hazard

**SECTION 16 OTHER INFORMATION**

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