

# Material Safety Data Sheet CAT ANTI-SEIZE (HIGH TEMP)

## 1. Product and company identification

| Material uses        | 1   | Industrial applications: Antiseize agents  |  |  |  |
|----------------------|---|--|--|--|--|
| Manufacturer         | facturer : Chemtool Incorporated<br>801 West Rockton Road<br>Rockton, IL 61072 U.S.A.<br>Tel: +01 815.957.4140<br>Fax: +01 815.624.0292 |  |  |  |  |
| Product code         | ;   | LID1556000   |  |  |  |
| MSDS #               | ;   | 1415   |  |  |  |
| Validation date      | ;   | 11/1/2012.   |  |  |  |
| In case of emergency | :   | INFOTRAC<br>U.S. and Canada - 800.535.5053<br>Outside the U.S. and Canada - +01 352.323.3500 |  |  |  |

## 2. Hazards identification

| Emergency overview             |   |  |
|--------------------------------|---|--|
| Physical state                 | ; | Solid. [grease]  |
| Color                          | ; | Bronze.  |
| Odor                           | : | Mild. Hydrocarbon.   |
| Signal word                    | : | WARNING!   |
| Hazard statements              | : | CAUSES EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE<br>TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD -<br>CONTAINS MATERIAL WHICH CAN CAUSE CANCER.  |
| Precautionary measures         | : | Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Use personal protective equipment as required. Wash thoroughly after handling. |
| OSHA/HCS status                | : | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  |
| Routes of entry                | : | Dermal contact. Eye contact. Inhalation. Ingestion.  |
| Potential acute health effects | 5 |  |
| Inhalation                     | : | Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.   |
| Ingestion                      | : | No known significant effects or critical hazards.  |

|                              |              | <b>MSDS # :</b> 1415   |
|------------------------------|--------------|--|
| 2. Hazards identi            |              |  |
| Skin                         | Н            | Aay cause skin irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE<br>IEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE<br>OLLOWED.   |
| Eyes                         | m<br>H       | Nay cause eye irritation. No significant irritation expected other than possible<br>nechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE<br>IEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE<br>OLLOWED. |
| Potential chronic health ef  | <u>fects</u> |  |
| Chronic effects              | : C          | Contains material that may cause target organ damage, based on animal data.  |
| Carcinogenicity              | le<br>E      | Contains material which can cause cancer. Risk of cancer depends on duration and<br>evel of exposure. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH<br>EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE<br>OLLOWED.      |
| Mutagenicity                 | : N          | lo known significant effects or critical hazards.  |
| Teratogenicity               | : N          | lo known significant effects or critical hazards.  |
| <b>Developmental effects</b> | : N          | lo known significant effects or critical hazards.  |
| Fertility effects            | : N          | lo known significant effects or critical hazards.  |
| Target organs                | m            | Contains material which may cause damage to the following organs: blood, lungs, liver, nucous membranes, gastrointestinal tract, cardiovascular system, upper respiratory ract, skin, eye, lens or cornea.                         |
| Over-exposure signs/sym      | otoms        |  |
| Inhalation                   | : N          | lo specific data.  |
| Ingestion                    | : N          | lo specific data.  |
| Skin                         | ir           | Adverse symptoms may include the following:<br>rritation<br>edness   |
| Eyes                         | p<br>w       | Adverse symptoms may include the following:<br>pain or irritation<br>vatering<br>edness  |
| Medical conditions           |              | Pre-existing disorders involving any target organs mentioned in this MSDS as being at  |

exposure See toxicological information (Section 11)

## 3. Composition/information on ingredients

#### **United States**

aggravated by over-

| Name  | CAS number | %       |
|---|------------|---------|
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | 64742-65-0 | 30-50   |
| Natural graphite  | 7782-42-5  | 15-30   |
| Distillates (petroleum), hydrotreated heavy naphthenic    | 64742-52-5 | 10-20   |
| copper  | 7440-50-8  | 10-20   |
| calcium dihydroxide                                       | 1305-62-0  | 7-13    |
| sodium nitrite  | 7632-00-0  | 0.5-1.5 |
| Quartz (SiO2)   | 14808-60-7 | 0.2-1.0 |

risk may be aggravated by over-exposure to this product.

<u>Canada</u>

|   |            | MSDS #: 1415 |
|---|------------|--------------|
| 3. Composition/information on ingredients                 | 5          |              |
| Name  | CAS number | %            |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | 64742-65-0 | 30-50        |
| Natural graphite  | 7782-42-5  | 15-30        |
| Distillates (petroleum), hydrotreated heavy naphthenic    | 64742-52-5 | 10-20        |
| copper  | 7440-50-8  | 10-20        |
| calcium dihydroxide                                       | 1305-62-0  | 7-13         |
| sodium nitrite  | 7632-00-0  | 0.5-1.5      |
| Quartz (SiO2)   | 14808-60-7 | 0.2-1.0      |

#### Mexico

|   |               |                   |         |                        |   |   | acom | sation  |
|---|---------------|-------------------|---------|------------------------|---|---|------|---------|
| Name  | CAS<br>number | UN number         | %       | IDLH                   | Н | F | R    | Special |
| Distillates (petroleum),<br>solvent-dewaxed heavy<br>paraffinic | 64742-65-0    | Not<br>available. | 30-50   | 2500 mg/m <sup>3</sup> | 1 | 1 | 0    | -       |
| Natural graphite  | 7782-42-5     | Not<br>available. | 15-30   | 1250 mg/m <sup>3</sup> | 1 | 0 | 0    | -       |
| Distillates (petroleum),<br>hydrotreated heavy<br>naphthenic    | 64742-52-5    | Not<br>available. | 10-20   | 2500 mg/m³             | 1 | 1 | 0    | -       |
| calcium dihydroxide   | 1305-62-0     | Not<br>available. | 7-13    | -                      | 2 | 0 | 0    | -       |
| sodium nitrite  | 7632-00-0     | Not<br>available. | 0.5-1.5 | -                      | 1 | 0 | 0    | -       |
| copper  | 7440-50-8     | Not<br>available. | 10-20   | 100 mg/m <sup>3</sup>  | 0 | 0 | 0    | -       |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## 4. First aid measures

| Eye contact                | Check for and remove any contact lenses. Immediately flush eyes with plenty of water<br>for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical<br>attention immediately.   |
|----------------------------|--|
| Skin contact               | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.  |
| Inhalation                 | Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.   |
| Ingestion                  | Wash out mouth with water. Do not induce vomiting unless directed to do so by medic<br>personnel. Never give anything by mouth to an unconscious person. Get medical<br>attention immediately.   |
| 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 o 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. |
| Notes to physician         | In case of inhalation of decomposition products in a fire, symptoms may be delayed.<br>The exposed person may need to be kept under medical surveillance for 48 hours.   |
| Validated on 11/1/2012.    | 3  |

#### Classification

#### 5. Fire-fighting measures

| Flammability of the product                    | : No specific fire or explosion hazard.   |
|--|---|
| Extinguishing media                            |   |
| Suitable                                       | : Use an extinguishing agent suitable for the surrounding fire.   |
| Not suitable                                   | : None known.   |
| Special exposure hazards                       | : 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. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| Hazardous thermal decomposition products       | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides<br>metal oxide/oxides   |
| 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.   |

#### 6. Accidental release measures

| and a second sec |   |  |
|--|---|--|
| Personal precautions   | Evacuate su<br>entering. De<br>Wear appro | nall be taken involving any personal risk or without suitable training.<br>Irrounding areas. Keep unnecessary and unprotected personnel from<br>o not touch or walk through spilled material. Provide adequate ventilation.<br>priate respirator when ventilation is inadequate. Put on appropriate<br>otective equipment (see Section 8). |
| Environmental precautions  | and sewers.<br>pollution (se              | rsal of spilled material and runoff and contact with soil, waterways, drains<br>Inform the relevant authorities if the product has caused environmental<br>wers, waterways, soil or air). Water polluting material. May be harmful to<br>nent if released in large quantities.   |
| Methods for cleaning up  |   |  |
| Small spill  | Move conta<br>designated,<br>contractor.  | ners from spill area. Vacuum or sweep up material and place in a labeled waste container. Dispose of via a licensed waste disposal   |
| Large spill  | sewers, wat<br>and place ir               | iners from spill area. Approach release from upwind. Prevent entry into<br>er courses, basements or confined areas. Vacuum or sweep up material<br>a designated, labeled waste container. Dispose of via a licensed waste<br>ntractor. Note: see Section 1 for emergency contact information and Section<br>e disposal.                    |

#### 7. Handling and storage

Handling

: Put on appropriate personal protective equipment (see Section 8). 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. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. 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.

## 7. Handling and storage

#### Storage

: 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. 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.

### 8. Exposure controls/personal protection

#### **United States**

| Ingredient                                     | Exposure limits  |
|--|--|
| Distillates (petroleum), solvent-dewaxed heavy | ACGIH TLV (United States, 1/2011).   |
| paraffinic                                     | TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction                             |
|  | NIOSH REL (United States, 6/2009).   |
|  | TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist  |
|  | STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist                                      |
|  | OSHA PEL (United States, 6/2010).  |
|  | TWA: 5 mg/m <sup>3</sup> 8 hours.  |
| Natural graphite                               | OSHA PEL 1989 (United States, 3/1989).   |
|  | TWA: 2.5 mg/m <sup>3</sup> 8 hours. Form: Respirable dust                              |
|  | ACGIH TLV (United States, 1/2011).   |
|  | TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction                            |
|  | NIOSH REL (United States, 6/2009).   |
|  | TWA: 2.5 mg/m <sup>3</sup> 10 hours. Form: Respirable fraction                         |
|  | OSHA PEL Z3 (United States, 9/2005).   |
|  | TWA: 15 mppcf 8 hours.   |
| Distillates (petroleum), hydrotreated heavy    | ACGIH TLV (United States, 1/2011).   |
| naphthenic                                     | TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction                             |
|  | NIOSH REL (United States, 6/2009).   |
|  | TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist  |
|  | STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist<br>OSHA PEL (United States, 6/2010). |
|  | TWA: 5 mg/m <sup>3</sup> 8 hours.  |
| copper   | OSHA PEL 1989 (United States, 3/1989).   |
| copper   | TWA: 1 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: Dusts and Mists                      |
|  | TWA: 0.1 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: Fume                               |
|  | NIOSH REL (United States, 6/2009).   |
|  | TWA: 1 mg/m <sup>3</sup> 10 hours. Form: Dusts and Mists                               |
|  | OSHA PEL (United States, 6/2010).  |
|  | TWA: 1 mg/m <sup>3</sup> 8 hours. Form: Dusts and Mists                                |
|  | TWA: 0.1 mg/m <sup>3</sup> 8 hours. Form: Fume   |
|  | ACGIH TLV (United States, 1/2011).   |
|  | TWA: 1 mg/m <sup>3</sup> , (as Cu) 8 hours.  |
|  | TWA: 0.2 mg/m <sup>3</sup> 8 hours. Form: Fume   |
| calcium dihydroxide                            | ACGIH TLV (United States, 1/2011).   |
|  | TWA: 5 mg/m <sup>3</sup> 8 hours.  |
|  | OSHA PEL 1989 (United States, 3/1989).   |
|  | TWA: 5 mg/m <sup>3</sup> 8 hours.  |
|  | NIOSH REL (United States, 6/2009).   |
|  | TWA: 5 mg/m <sup>3</sup> 10 hours.   |
|  | OSHA PEL (United States, 6/2010).  |
|  | TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction                            |
|  | TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust                                    |

### 8. Exposure controls/personal protection

| Quartz (SiO2) | OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO2+5)               |
|---------------|---|
|               |   |
|               | TWA: 250 mppcf 8 hours. Form: Respirable                                |
|               | OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO2+2)                 |
|               | TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Respirable                     |
|               | OSHA PEL 1989 (United States, 3/1989).                                  |
|               | TWA: 0.1 mg/m <sup>3</sup> , (as quartz) 8 hours. Form: Respirable dust |
|               | ACGIH TLV (United States, 1/2011).                                      |
|               | TWA: 0.025 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction         |
|               | NIOSH REL (United States, 6/2009).                                      |
|               | TWA: 0.05 mg/m <sup>3</sup> 10 hours. Form: respirable dust             |
|               | OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO2+2)                |
|               | TWA: 30 mg/m <sup>3</sup> 8 hours. Form: Total dust.                    |

#### Canada

| Occupational exposure limits                                  |                        | TWA | (8 hours  | ;)    | STEL | (15 mir   | ıs)   | Ceiling |           |            |           |
|---|------------------------|-----|-----------|-------|------|-----------|-------|---------|-----------|------------|-----------|
| Ingredient  | List name              | ppm | mg/<br>m³ | Other | ppm  | mg/<br>m³ | Other | ppm     | mg/<br>m³ | Other      | Notations |
| Natural graphite  | US ACGIH 1/2011        | -   | 2         | -     | -    | -         | -     |         | -         | -          | [a]       |
|   | AB 4/2009              |     | 2         | -     | -    | -         | -     | -       | -         | -          | [b]       |
|   | BC 9/2011              | -   | 2         | -     | -    | 1.00      | -     | -       | -         | -          | [c]       |
|   | ON 7/2010              | -   | 2         |       | -    | -         | -     | -       | -         | <b>-</b> 2 | [a]       |
|   | QC 9/2011              | -0  | 2         | -     |      |           | -     | -       | -         | -          | [d]       |
| calcium dihydroxide   | US ACGIH 1/2011        | -   | 5         | -     | -    | -         | -     | -       | -         | -          |           |
|   | AB 4/2009              | -2  | 5         | - 1   | -    | -         | -     | -       | -         | -          | [3]       |
|   | BC 9/2011              | -   | 5         | -     | -    | -         | -     | -       | -         | -          | 0.000.000 |
|   | ON 7/2010              |     | 5         |       | -    | -         | -     | -       | -         | -          |           |
|   | QC 9/2011              | -   | 5         | -     | -    | -         | -     | -       | -         | -          |           |
| copper, as Cu   | <b>US ACGIH 1/2011</b> | -   | 1         | -     | -    | -         | -     | -       | -         | -          |           |
| sepper, as an   | US ACGIH 1/2011        |     | 0.2       | -     | -    | -         | -     | -       | -         | -          | [e]       |
|   | AB 4/2009              | -   | 1         |       | -    | -         | -     | -       | -         | -          | [f]       |
|   |                        | -   | 0.2       | -     | -    | -         | -     | -       | -         | -          | [e]       |
|   | BC 9/2011              | -   | 1         | -     | -    | -         | -     | -       | -         | -          | [g]       |
|   |                        | -   | 0.2       | -     | -    | -         |       | -       | -         | -          | [e]       |
| copper  | ON 7/2010              | -   | 0.2       | -     | -    | -         | 3     | -       | -         | -          | [e]       |
| 00000   | ON 7/2010              | -   | 1         | -     | -    | -         | 4     | -       | -         | -          | [h]       |
| copper, as Cu   | QC 9/2011              | -   | 1         | -     | -    | -         | -     | -       | -         | -          | [1]       |
|   | QC 9/2011              | -   | 0.2       | -     | -    | -         | =     | -       | -         | -          | [1]       |
| Quartz (SiO2)   | US ACGIH 1/2011        | -   | 0.025     | -     | -    | -         | 2     | -       | -         | -          | [a]       |
|   | AB 4/2009              | -   | 0.025     | -     | -    | -         | -     |         | -         | -          | [k]       |
|   | BC 9/2011              | -   | 0.025     | -     | -    | -         | -     | -       | -         |            | [c]       |
|   | ON 7/2010              | -   | 0.1       | -     | -    | -         | -     | -       | -         | 20         | 0         |
|   | QC 9/2011              | -   | 0.1       | -     | -    | -         | -     | -       | -         | -          | [d]       |
| Distillates (petroleum), solvent-<br>dewaxed heavy paraffinic | US ACGIH 1/2011        | -   | 5         | -     | -    | -         | -     | -       | -         | -          | [m]       |
| demander noury paraminio                                      | AB 4/2009              | -   | 5         | -     | -    | 10        | -     |         | -         | -          | [n]       |
|   | ON 7/2010              | -   | 5         | -     | -    | 10        | -     | 140     | -         | -          | [0]       |
|   | QC 9/2011              | -   | 5         | -     | -    | 10        | -     |         | -         | -          | [0]       |
| Distillates (petroleum), hydrotreated<br>heavy naphthenic     | US ACGIH 1/2011        | -   | 5         | -     | -    | -         | -     | -       | -         | -          | [m]       |
| inder J inderination  | ON 7/2010              | -   | 5         | -     | -    | 10        | -     | -       | -         | -          | [o]       |
|   | QC 9/2011              | -   | 5         | -     | -    | 10        | -     |         | -         | -          | [0]       |

[3]Skin sensitization

**Form:** [a]Respirable fraction [b]Respirable (all forms except graphite fibres) [c]Respirable [d]Respirable dust. [e]Fume [f] Dusts and Mists [g]Dusts and mists [h]dust and mists [i]dusts & mists [j]fume [k]Respirable particulate [l]Respirable fraction: means that size fraction of the airborne particulate deposited in the gas-exchange region of the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size-selective sampling criteria for airborne particulate matter; and (b) has the cut point of 4 µm at 50 per cent collection efficiency. [m] Inhalable fraction [n]Mist [o]mist

#### <u>Mexico</u>

## 8. Exposure controls/personal protection

**Occupational exposure limits** 

| Ingredient                                     | Exposure limits   |
|--|---|
| Distillates (petroleum), solvent-dewaxed heavy | NOM-010-STPS (Mexico, 9/2000).  |
| paraffinic                                     | LMPE-PPT: 5 mg/m <sup>3</sup> 8 hours. Form: mist                       |
|  | LMPE-CT: 10 mg/m <sup>3</sup> 15 minutes. Form: mist                    |
| Natural graphite                               | NOM-010-STPS (Mexico, 9/2000).  |
| And A top                                      | LMPE-PPT: 2 mg/m <sup>3</sup> 8 hours.                                  |
| Distillates (petroleum), hydrotreated heavy    | NOM-010-STPS (Mexico, 9/2000).  |
| naphthenic                                     | LMPE-PPT: 5 mg/m <sup>3</sup> 8 hours. Form: mist                       |
|  | LMPE-CT: 10 mg/m <sup>3</sup> 15 minutes. Form: mist                    |
| copper   | NOM-010-STPS (Mexico, 9/2000).  |
|  | LMPE-PPT: 1 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: powder and fog   |
|  | LMPE-CT: 2 mg/m <sup>3</sup> , (as Cu) 15 minutes. Form: powder and fog |
|  | LMPE-PPT: 0.2 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: smoke          |
|  | LMPE-CT: 2 mg/m <sup>3</sup> , (as Cu) 15 minutes. Form: smoke          |
| calcium dihydroxide                            | NOM-010-STPS (Mexico, 9/2000).  |
|  | LMPE-PPT: 5 mg/m <sup>3</sup> 8 hours.                                  |

Consult local authorities for acceptable exposure limits.

| consult local admontics for          |  |
|--------------------------------------|--|
| Recommended monitoring<br>procedures | : If this product contains ingredients with exposure limits, personal, workplace<br>atmosphere or biological monitoring may be required to determine the effectiveness of<br>the ventilation or other control measures and/or the necessity to use respiratory<br>protective equipment. Reference should be made to appropriate monitoring standards.<br>Reference to national guidance documents for methods for the determination of<br>hazardous substances will also be required.  |
| Engineering measures                 | : 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.   |
| Hygiene measures                     | : Wash hands, forearms and face thoroughly after handling chemical products, before<br>eating, smoking and using the lavatory and at the end of the working period.<br>Appropriate techniques should be used to remove potentially contaminated clothing.<br>Wash contaminated clothing before reusing. Ensure that eyewash stations and safety<br>showers are close to the workstation location.  |
| Personal protection                  |  |
| Respiratory                          | : Use a properly fitted, particulate filter 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.  |
| Hands                                | : Chemical-resistant, impervious gloves complying with an approved standard should be<br>worn at all times when handling chemical products if a risk assessment indicates this is<br>necessary. Considering the parameters specified by the glove manufacturer, check<br>during use that the gloves are still retaining their protective properties. It should be<br>noted that the time to breakthrough for any glove material may be different for different<br>glove manufacturers. In the case of mixtures, consisting of several substances, the<br>protection time of the gloves cannot be accurately estimated. |
| Eyes                                 | : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.  |
| Skin                                 | : 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.  |

## 8. Exposure controls/personal protection

| Provide the second second | : Emissions from ventilation or work process equipment should be checked to ensure   |
|---------------------------|--|
| Environmental exposure    |  |
| controls                  | 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.                          |

## 9. Physical and chemical properties

| Physical state                    | : | Solid. [grease]                                   |
|-----------------------------------|---|---|
| Flash point                       | : | Not available.                                    |
| Auto-ignition temperature         | : | Not available.                                    |
| Flammable limits                  | : | Not available.                                    |
| Color                             | : | Bronze.   |
| Odor                              | : | Mild. Hydrocarbon.                                |
| pH                                | : | Not applicable.                                   |
| <b>Boiling/condensation point</b> | : | Not available.                                    |
| Melting/freezing point            | : | Not available.                                    |
| Density                           | : | 1.2 g/cm <sup>3</sup>                             |
| Vapor pressure                    | : | Not available.                                    |
| Vapor density                     | : | Not available.                                    |
| Volatility                        | : | Not available.                                    |
| Evaporation rate                  | : | Not available.                                    |
| Viscosity                         | : | Not available.                                    |
| <b>Dispersibility properties</b>  | : | Not available.                                    |
| Solubility                        | : | Insoluble in the following materials: cold water. |
|                                   |   |   |

## 10. Stability and reactivity

| Chemical stability                    | : The product is stable.   |
|---------------------------------------|--|
| Conditions to avoid                   | : No specific data.  |
| Incompatible materials                | : No specific data.  |
| Hazardous decomposition<br>products   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| Possibility of hazardous<br>reactions | : Under normal conditions of storage and use, hazardous reactions will not occur.                      |

## 11. Toxicological information

#### United States

#### Acute toxicity

| Product/ingredient name   | Result                 | Species    | Dose                       | Exposure |
|---|------------------------|------------|----------------------------|----------|
| Distillates (petroleum),<br>solvent-dewaxed heavy<br>paraffinic | LD50 Dermal            | Rabbit     | >5000 mg/kg                | 170 -    |
| Distillates (petroleum),<br>hydrotreated heavy                  | LD50 Oral<br>LD50 Oral | Rat<br>Rat | >5000 mg/kg<br>>5000 mg/kg | -        |
| naphthenic<br>calcium dihydroxide                               | LD50 Oral              | Rat        | 7340 mg/kg                 | -        |

| Conclusion/Summary  | : | No known signif  | ficant effects c   | or critical hazar   | ds.  |   |  |  |
|---|---|--|--|---|--|---|--|--|
| Chronic toxicity<br>Conclusion/Summary  | : | : Contains material that may cause target organ damage, based on animal data.  |  |   |  |   |  |  |
| rritation/Corrosion   |   | Desult   |  | Question  | 0  | -   |  |  |
| Product/ingredient name   |   | Result   |  | Species   | Score  | Exposure  | Observation  |  |
| Distillates (petroleum),<br>hydrotreated heavy<br>naphthenic  |   | Skin - Severe irrit  |  | Rabbit  | -  | 500<br>milligrams   | -  |  |
| calcium dihydroxide<br>sodium nitrite   |   | Eyes - Severe irri<br>Eyes - Mild irritan  |  | Rabbit<br>Rabbit  | -  | 10 milligrams<br>24 hours 500<br>milligrams   | -  |  |
| Conclusion/Summary  |   |  |  |   |  | 1   |  |  |
| Skin  | : | May cause skin<br>HEALTH EFFE0<br>FOLLOWED.  |  |   |  |   |  |  |
| Eyes  | : | May cause eye i<br>HEALTH EFFE0<br>FOLLOWED.   |  |   |  |   |  |  |
| Respiratory   | : | Repeated or pro  | olonged expos  | ure to spray or   | mist may p   | roduce respirate  | ory tract irritatio                                      |  |
| <u>eensitizer</u><br>Conclusion/Summary   |   |  |  |   |  |   |  |  |
|   |   |  |  |   |  |   |  |  |
| E-1   |   | No specific infor  | mation is avai   | ilable in our da  | tabasa rada  | rding the skin s  | onsitizing   |  |
| Skin  | : | No specific infor properties of this   | mation is avai<br>s product. Ser   | ilable in our da<br>sitization not s  | tabase rega<br>uspected fo   | rding the skin s<br>or humans.  | ensitizing   |  |
| Skin<br>Respiratory   | : | No specific infor<br>properties of this<br>Sensitization no  | s product. Ser   | sitization not s  | tabase rega<br>suspected fo  | rding the skin s<br>or humans.  | ensitizing   |  |
| Skin<br>Respiratory<br>Carcinogenicity  |   | properties of this<br>Sensitization no   | s product. Ser<br>t suspected fo   | nsitization not s<br>r humans.  | uspected fo  | or humans.  | -  |  |
| Skin<br>Respiratory<br><u>Carcinogenicity</u><br>Conclusion/Summary   |   | properties of this   | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>ADVERSE HEA   | nsitization not s<br>r humans.<br>pected of caus<br>l of exposure.<br>ALTH EFFECT   | ing cancer i<br>NOT EXPE   | r humans.<br>f inhaled. Risk o<br>CTED TO PROI  | of cancer<br>DUCE  |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br><u>Classification</u>   |   | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS   | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>ADVERSE HEA<br>S FOR USE A  | sitization not s<br>r humans.<br>pected of caus<br>l of exposure.<br>ALTH EFFECT<br>RE FOLLOWE  | ing cancer ing cancer ing cancer is NOT EXPECTED WHEN TED.                               | f inhaled. Risk o<br>CTED TO PROI<br>HE RECOMME   | of cancer<br>DUCE<br>NDED                                |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name   |   | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A   | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>DVERSE HE<br>S FOR USE A<br>IARC  | nsitization not s<br>r humans.<br>pected of caus<br>l of exposure.<br>ALTH EFFECT   | ing cancer i<br>NOT EXPE   | r humans.<br>f inhaled. Risk o<br>CTED TO PROI  | of cancer<br>DUCE  |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name<br>sodium nitrite<br>Quartz (SiO2)  |   | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS   | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>ADVERSE HEA<br>S FOR USE A  | sitization not s<br>r humans.<br>pected of caus<br>l of exposure.<br>ALTH EFFECT<br>RE FOLLOWE  | ing cancer ing cancer ing cancer is NOT EXPECTED WHEN TED.                               | f inhaled. Risk o<br>CTED TO PROI<br>HE RECOMME   | of cancer<br>DUCE<br>NDED                                |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name<br>sodium nitrite<br>Quartz (SiO2)<br>Mutagenicity  | : | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS<br>ACGIH<br>-<br>A2   | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>DVERSE HEA<br>S FOR USE A<br>IARC<br>2A<br>1  | isitization not s<br>ir humans.<br>pected of caus<br>of exposure.<br>ALTH EFFECT<br>RE FOLLOWE<br>EPA<br>-<br>-   | ing cancer<br>NOT EXPECT<br>S WHEN T<br>ED.<br>NIOSH<br>-<br>+                           | or humans.<br>if inhaled. Risk of<br>CTED TO PROI<br>HE RECOMME<br>NTP<br>-<br>Proven.  | of cancer<br>DUCE<br>NDED<br>OSHA<br>-<br>-              |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name<br>sodium nitrite<br>Quartz (SiO2)<br>Autagenicity<br>Conclusion/Summary  | : | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS   | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>DVERSE HEA<br>S FOR USE A<br>IARC<br>2A<br>1  | isitization not s<br>ir humans.<br>pected of caus<br>of exposure.<br>ALTH EFFECT<br>RE FOLLOWE<br>EPA<br>-<br>-   | ing cancer<br>NOT EXPECT<br>S WHEN T<br>ED.<br>NIOSH<br>-<br>+                           | or humans.<br>if inhaled. Risk of<br>CTED TO PROI<br>HE RECOMME<br>NTP<br>-<br>Proven.  | of cancer<br>DUCE<br>NDED<br>OSHA<br>-<br>-              |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name<br>sodium nitrite<br>Quartz (SiO2)<br>Mutagenicity<br>Conclusion/Summary  | : | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS<br>ACGIH<br>-<br>A2<br>There are no da  | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>DVERSE HEA<br>S FOR USE A<br>IARC<br>2A<br>1  | isitization not s<br>ir humans.<br>pected of caus<br>of exposure.<br>ALTH EFFECT<br>RE FOLLOWE<br>EPA<br>-<br>-   | ing cancer<br>NOT EXPECT<br>S WHEN T<br>ED.<br>NIOSH<br>-<br>+                           | or humans.<br>if inhaled. Risk of<br>CTED TO PROI<br>HE RECOMME<br>NTP<br>-<br>Proven.  | of cancer<br>DUCE<br>NDED<br>OSHA<br>-<br>-              |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name<br>sodium nitrite<br>Quartz (SiO2)<br>Autagenicity<br>Conclusion/Summary<br>Conclusion/Summary  | : | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS<br>ACGIH<br>-<br>A2<br>There are no da  | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>ADVERSE HEA<br>S FOR USE A<br>IARC<br>2A<br>1<br>ta available or                                      | nsitization not s<br>or humans.<br>I of exposure.<br>ALTH EFFECT<br>RE FOLLOWE<br>EPA<br>-<br>-   | ing cancer in<br>NOT EXPECTS WHEN T<br>S WHEN T<br>D.<br>NIOSH<br>-<br>+<br>self. Mutage | f inhaled. Risk of<br>CTED TO PROI<br>HE RECOMME<br>-<br>Proven.  | of cancer<br>DUCE<br>NDED<br>OSHA<br>-<br>-              |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name<br>sodium nitrite<br>Quartz (SiO2)<br>Mutagenicity<br>Conclusion/Summary<br>Ceratogenicity<br>Conclusion/Summary<br>Reproductive toxicity | : | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS<br>ACGIH<br>-<br>A2<br>There are no da<br>humans.<br>There are no da<br>humans. | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>DVERSE HE/<br>S FOR USE A<br>IARC<br>2A<br>1<br>ta available or<br>ta available or                    | nsitization not s<br>or humans.<br>pected of caus<br>of exposure.<br>ALTH EFFECT<br>RE FOLLOWE<br>EPA<br>-<br>-<br>-<br>-<br>-<br>-<br>-  | self. Terato   | or humans.<br>If inhaled. Risk of<br>CTED TO PROI<br>HE RECOMME<br>-<br>Proven.<br>enicity not suspendent<br>genicity not suspendent<br>genicity not suspendent   | of cancer<br>DUCE<br>NDED<br>OSHA<br>-<br>-<br>ected for |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name<br>sodium nitrite<br>Quartz (SiO2)<br>Autagenicity<br>Conclusion/Summary<br>Ceratogenicity<br>Conclusion/Summary                          | : | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS<br>ACGIH<br>-<br>A2<br>There are no da<br>humans.                               | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>DVERSE HEA<br>S FOR USE A<br>IARC<br>2A<br>1<br>ta available or<br>ta available or<br>ta available or | nsitization not s<br>or humans.<br>pected of caus<br>of exposure.<br>ALTH EFFECT<br>RE FOLLOWE<br>EPA<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- | self. Terato   | or humans.<br>If inhaled. Risk of<br>CTED TO PROI<br>HE RECOMME<br>-<br>Proven.<br>enicity not suspendent<br>genicity not suspendent<br>genicity not suspendent   | of cancer<br>DUCE<br>NDED<br>OSHA<br>-<br>-<br>ected for |  |
| Skin<br>Respiratory<br>Carcinogenicity<br>Conclusion/Summary<br>Classification<br>Product/ingredient name<br>sodium nitrite<br>Quartz (SiO2)<br>Mutagenicity<br>Conclusion/Summary<br>Ceratogenicity<br>Conclusion/Summary<br>Reproductive toxicity | : | properties of this<br>Sensitization no<br>Contains crystal<br>depends on dura<br>SIGNIFICANT A<br>INSTRUCTIONS<br>ACGIH<br>-<br>A2<br>There are no da<br>humans.<br>There are no da<br>humans. | s product. Sen<br>t suspected fo<br>line silica Sus<br>ation and leve<br>DVERSE HEA<br>S FOR USE A<br>IARC<br>2A<br>1<br>ta available or<br>ta available or<br>ta available or | nsitization not s<br>or humans.<br>pected of caus<br>of exposure.<br>ALTH EFFECT<br>RE FOLLOWE<br>EPA<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- | self. Terato   | or humans.<br>If inhaled. Risk of<br>CTED TO PROI<br>HE RECOMME<br>-<br>Proven.<br>enicity not suspendent<br>genicity not suspendent | of cancer<br>DUCE<br>NDED<br>OSHA<br>-<br>-<br>ected for |  |

## 11. Toxicological information

| Product/ingredient name   | Result   |   | Species   | Dose   |   | Exposure   |
|---|--|---|---|--|---|--|
| alcium dihydroxide<br>Distillates (petroleum),<br>olvent-dewaxed heavy<br>paraffinic  | LD50 Oral<br>LD50 Dermal   |   |   | -  |   |  |
| Distillates (petroleum),<br>nydrotreated heavy<br>naphthenic  | LD50 Oral  |   | Rat   |  | 0 mg/kg   | -  |
| Conclusion/Summary  | : No known signific  | ant effects or  | critical hazards  | S.   |   |  |
| <u>:hronic toxicity</u><br>Conclusion/Summary<br><u>ritation/Corrosion</u>  | : Contains material  | that may car  | use target orgar  | ı damage   | , based on anii   | mal data.  |
| Product/ingredient name   | Result   |   | Species   | Score  | Exposure  | Observation  |
| calcium dihydroxide<br>sodium nitrite   | Eyes - Severe irrita<br>Eyes - Mild irritant   | int   | Rabbit<br>Rabbit  | -  | 10 milligrams<br>24 hours 500<br>milligrams   |  |
| Distillates (petroleum),<br>nydrotreated heavy<br>naphthenic  | Skin - Severe irritar  | nt  | Rabbit  | -  | 500<br>milligrams   | -  |
|   |  |   |   |  |   |  |
| Conclusion/Summary  |  |   |   |  |   |  |
| Conclusion/Summary<br>Skin  | : May cause skin ir<br>HEALTH EFFEC <sup>~</sup><br>FOLLOWED.  | ritation. NOT<br>TS WHEN TH   | EXPECTED TO   | D PRODU<br>NDED INS  | ICE SIGNIFIC  | ANT ADVERSE<br>FOR USE ARE   |
|   | HEALTH EFFEC   | TS WHEN TH  | HE RECOMMEN   | NDED INS   | TRUCTIONS   | FOR USE ARE  |
| Skin  | HEALTH EFFEC<br>FOLLOWED.<br>May cause eye irr<br>HEALTH EFFEC   | TS WHEN TH<br>ritation. NOT<br>TS WHEN TH   | HE RECOMMENT<br>EXPECTED TO<br>HE RECOMMENT   | NDED INS<br>PRODU<br>NDED INS  | STRUCTIONS<br>CE SIGNIFICA<br>STRUCTIONS  | FOR USE ARE<br>ANT ADVERSE<br>FOR USE ARE  |
| Skin<br>Eyes<br>Respiratory<br>Sensitizer   | HEALTH EFFEC<br>FOLLOWED.<br>May cause eye irr<br>HEALTH EFFEC<br>FOLLOWED.  | TS WHEN TH<br>ritation. NOT<br>TS WHEN TH   | HE RECOMMENT<br>EXPECTED TO<br>HE RECOMMENT   | NDED INS<br>PRODU<br>NDED INS  | STRUCTIONS<br>CE SIGNIFICA<br>STRUCTIONS  | FOR USE ARE<br>ANT ADVERSE<br>FOR USE ARE  |
| Skin<br>Eyes<br>Respiratory   | HEALTH EFFEC<br>FOLLOWED.<br>May cause eye irr<br>HEALTH EFFEC<br>FOLLOWED.  | TS WHEN TH<br>ritation. NOT<br>TS WHEN TH<br>onged expose<br>nation is avai   | HE RECOMMENT<br>EXPECTED TO<br>HE RECOMMENT<br>ure to spray or r  | NDED INS<br>PRODU<br>NDED INS<br>nist may p<br>base rega   | STRUCTIONS<br>CE SIGNIFICA<br>STRUCTIONS<br>produce respira<br>arding the skin  | FOR USE ARE<br>ANT ADVERSE<br>FOR USE ARE<br>atory tract irritatic                 |
| Skin<br>Eyes<br>Respiratory<br>Sensitizer<br>Conclusion/Summary   | <ul> <li>HEALTH EFFEC<br/>FOLLOWED.</li> <li>May cause eye irr<br/>HEALTH EFFEC<br/>FOLLOWED.</li> <li>Repeated or proto</li> <li>No specific inform</li> </ul>  | TS WHEN TH<br>ritation. NOT<br>TS WHEN TH<br>onged expose<br>product sen  | HE RECOMMENT<br>EXPECTED TO<br>HE RECOMMENT<br>ure to spray or r<br>ure to spray or r<br>lable in our data  | NDED INS<br>PRODU<br>NDED INS<br>nist may p<br>base rega   | STRUCTIONS<br>CE SIGNIFICA<br>STRUCTIONS<br>produce respira<br>arding the skin  | FOR USE ARE<br>ANT ADVERSE<br>FOR USE ARE<br>atory tract irritatic                 |
| Skin<br>Eyes<br>Respiratory<br><u>Sensitizer</u><br>Conclusion/Summary<br>Skin  | <ul> <li>HEALTH EFFECTFOLLOWED.</li> <li>May cause eye irrHEALTH EFFECTFOLLOWED.</li> <li>Repeated or protection</li> <li>No specific informproperties of this</li> <li>Sensitization not set the set of the set</li></ul>                  | TS WHEN TH<br>ritation. NOT<br>TS WHEN TH<br>onged expose<br>nation is avai<br>product. Sen<br>suspected fo   | HE RECOMMENT<br>EXPECTED TO<br>HE RECOMMENT<br>ure to spray or r<br>lable in our data<br>sitization not su<br>r humans.   | NDED INS<br>O PRODU<br>NDED INS<br>nist may p<br>base rega<br>spected fo                                 | STRUCTIONS<br>CE SIGNIFICA<br>STRUCTIONS<br>produce respira<br>arding the skin<br>or humans.                                    | FOR USE ARE<br>ANT ADVERSE<br>FOR USE ARE<br>atory tract irritatic                 |
| Skin<br>Eyes<br>Respiratory<br><u>Sensitizer</u><br>Conclusion/Summary<br>Skin<br>Respiratory   | <ul> <li>HEALTH EFFEC<br/>FOLLOWED.</li> <li>May cause eye irr<br/>HEALTH EFFEC<br/>FOLLOWED.</li> <li>Repeated or proto</li> <li>No specific inform<br/>properties of this</li> </ul>   | TS WHEN TH<br>ritation. NOT<br>TS WHEN TH<br>onged expose<br>nation is avai<br>product. Sen<br>suspected fo<br>ne silica Susp<br>tion and level<br>DVERSE HE/ | HE RECOMMENT<br>EXPECTED TO<br>HE RECOMMENT<br>ure to spray or r<br>lable in our data<br>sitization not su<br>r humans.<br>Dected of causir<br>of exposure. N<br>ALTH EFFECTS | NDED INS<br>PRODU<br>NDED INS<br>nist may p<br>base rega<br>spected fo<br>ng cancer<br>OT EXPE<br>WHEN T | STRUCTIONS<br>CE SIGNIFICA<br>STRUCTIONS<br>produce respira<br>arding the skin<br>or humans.<br>if inhaled. Risk<br>CTED TO PRO | FOR USE ARE<br>ANT ADVERSE<br>FOR USE ARE<br>atory tract irritation<br>sensitizing |
| Skin<br>Eyes<br>Respiratory<br><u>Sensitizer</u><br>Conclusion/Summary<br>Skin<br>Respiratory<br>Carcinogenicity                              | <ul> <li>HEALTH EFFECT<br/>FOLLOWED.</li> <li>May cause eye irr<br/>HEALTH EFFECT<br/>FOLLOWED.</li> <li>Repeated or protocol</li> <li>No specific inform<br/>properties of this</li> <li>Sensitization not set</li> <li>Contains crystalling<br/>depends on durate<br/>SIGNIFICANT AD</li> </ul>  | TS WHEN TH<br>ritation. NOT<br>TS WHEN TH<br>onged expose<br>nation is avai<br>product. Sen<br>suspected fo<br>ne silica Susp<br>tion and level<br>DVERSE HE/ | HE RECOMMENT<br>EXPECTED TO<br>HE RECOMMENT<br>ure to spray or r<br>lable in our data<br>sitization not su<br>r humans.<br>Dected of causir<br>of exposure. N<br>ALTH EFFECTS | NDED INS<br>PRODU<br>NDED INS<br>nist may p<br>base rega<br>spected fo<br>ng cancer<br>OT EXPE<br>WHEN T | STRUCTIONS<br>CE SIGNIFICA<br>STRUCTIONS<br>produce respira<br>arding the skin<br>or humans.<br>if inhaled. Risk<br>CTED TO PRO | FOR USE ARE<br>ANT ADVERSE<br>FOR USE ARE<br>atory tract irritation<br>sensitizing |
| Skin<br>Eyes<br>Respiratory<br><u>Sensitizer</u><br>Conclusion/Summary<br>Skin<br>Respiratory<br><u>Carcinogenicity</u><br>Conclusion/Summary | <ul> <li>HEALTH EFFEC<br/>FOLLOWED.</li> <li>May cause eye irr<br/>HEALTH EFFEC<br/>FOLLOWED.</li> <li>Repeated or proto</li> <li>No specific inform<br/>properties of this</li> <li>Sensitization not sensitization not sensitiza</li></ul> | TS WHEN TH<br>ritation. NOT<br>TS WHEN TH<br>onged expose<br>nation is avai<br>product. Sen<br>suspected fo<br>ne silica Susp<br>tion and level<br>DVERSE HE/ | HE RECOMMENT<br>EXPECTED TO<br>HE RECOMMENT<br>ure to spray or r<br>lable in our data<br>sitization not su<br>r humans.<br>Dected of causir<br>of exposure. N<br>ALTH EFFECTS | NDED INS<br>PRODU<br>NDED INS<br>nist may p<br>base rega<br>spected fo<br>ng cancer<br>OT EXPE<br>WHEN T | STRUCTIONS<br>CE SIGNIFICA<br>STRUCTIONS<br>produce respira<br>arding the skin<br>or humans.<br>if inhaled. Risk<br>CTED TO PRO | FOR USE ARE<br>ANT ADVERSE<br>FOR USE ARE<br>atory tract irritation<br>sensitizing |

**Conclusion/Summary** : There are no data available on the mixture itself. Mutagenicity not suspected for humans.

**Teratogenicity** 

| informat  | ion  |   |   |  |   |
|---|--|---|---|--|---|
| : There are humans.   | no data available on   | the mixture itself  | f. Terato   | genicity not sus   | spected for   |
|   |  |   |   |  |   |
|   |  |   | . Not co  | nsidered to be   | dangerous to  |
|   |  |   |   |  |   |
|   |  |   |   |  |   |
| Result  |  | Species   | Dose  | e  | Exposure  |
| LD50 Derm   | nal  | Rabbit  | >500  | 0 mg/kg -  |   |
| LD50 Oral   |  |   |   |  |   |
| LD50 Oral   |  | Rat   | >500  | 0 mg/kg  -   |   |
| LD50 Oral   |  | Rat   | 7340  | mg/kg -  |   |
| : No knowr  | significant effects or   | critical hazards.   |   |  |   |
|   |  |   |   |  |   |
| : Contains  | material that may cau  | se target organ o   | damage,   | based on anim  | nal data.   |
|   |  |   |   |  |   |
| Result  |  | Score   | Score   | Exposure   | Observation   |
| Skin - Seve   | ere irritant   | Rabbit  | -   | 500<br>milligrams  | -   |
| Eves - Sev  | ere irritant   | Rabbit  | -   | 10 milligrams  | _   |
|   |  | Rabbit  | -   | 24 hours 500<br>milligrams   | -   |
|   |  |   |   |  | •   |
| HEALTH  | EFFECTS WHEN TH  | EXPECTED TO<br>E RECOMMEND  | Produ<br>Ded Ins  | CE SIGNIFICA<br>TRUCTIONS F  | NT ADVERSE<br>OR USE ARE  |
| HEALTH I  | EFFECTS WHEN TH  | EXPECTED TO F   | PRODU(<br>DED INS   | CE SIGNIFICAI<br>TRUCTIONS F   | NT ADVERSE<br>OR USE ARE  |
| : Repeated  | or prolonged exposur   | e to spray or mis   | st may p  | roduce respirat  | ory tract irritatio   |
|   |  |   |   |  |   |
|   |  |   |   |  |   |
|   |  |   |   |  |   |
| : No specifi  | c information is availa  | ble in our databa   | ase rega  | rding the skin a   | ensitizina  |
|   | c information is availa<br>of this product. Sensi  |   |   |  | sensitizing   |
| properties  |  | tization not susp   |   |  | sensitizing   |
| properties  | of this product. Sensi   | tization not susp   |   |  | sensitizing   |
| <ul> <li>properties</li> <li>Sensitization</li> <li>Contains of depends of SIGNIFIC.</li> </ul> | of this product. Sensi   | itization not susp<br>humans.<br>ected of causing<br>of exposure. NO<br>-TH EFFECTS V   | cancer i  | r humans.<br>f inhaled. Risk<br>CTED TO PRO  | of cancer<br>DUCE   |
|   | <ul> <li>There are humans.</li> <li>There are humans.</li> <li>There are humans.</li> <li>There are humans.</li> <li>Result</li> <li>LD50 Derm</li> <li>LD50 Oral</li> <li>LD50 Oral</li> <li>LD50 Oral</li> <li>LD50 Oral</li> <li>Stin - Seve</li> <li>Eyes - Seve</li> <li>Eyes - Seve</li> <li>Eyes - Mild</li> <li>May cause</li> <li>HEALTH</li> <li>FOLLOW</li> </ul> | <ul> <li>There are no data available on humans.</li> <li>There are no data available on humans, according to our data</li> <li>Result</li> <li>LD50 Dermal</li> <li>LD50 Oral</li> <li>LD50 Oral</li> <li>LD50 Oral</li> <li>LD50 Oral</li> <li>So known significant effects or</li> <li>Contains material that may cause</li> <li>Result</li> <li>Skin - Severe irritant</li> <li>Eyes - Severe irritant</li> <li>Eyes - Mild irritant</li> <li>May cause skin irritation. NOT E HEALTH EFFECTS WHEN THE FOLLOWED.</li> <li>May cause eye irritation. NOT E HEALTH EFFECTS WHEN THE FOLLOWED.</li> </ul> | <ul> <li>There are no data available on the mixture itself humans.</li> <li>There are no data available on the mixture itself humans, according to our database.</li> <li>Result Species</li> <li>LD50 Dermal Rat</li> <li>LD50 Oral Rat</li> <li>LD50 Oral Rat</li> <li>LD50 Oral Rat</li> <li>LD50 Oral Rat</li> <li>So known significant effects or critical hazards.</li> <li>Contains material that may cause target organ of Skin - Severe irritant Rabbit</li> <li>Eyes - Severe irritant Rabbit</li> <li>Eyes - Severe irritant Rabbit</li> <li>Skin - Severe irritant Rabbit</li> <li>Superior Score Severe irritant Rabbit</li> <li>May cause skin irritation. NOT EXPECTED TO HEALTH EFFECTS WHEN THE RECOMMENT FOLLOWED.</li> <li>May cause eye irritation. NOT EXPECTED TO FHEALTH EFFECTS WHEN THE RECOMMENT FOLLOWED.</li> </ul> | <ul> <li>There are no data available on the mixture itself. Terato humans.</li> <li>There are no data available on the mixture itself. Not co humans, according to our database.</li> <li>Result Species Dose</li> <li>LD50 Dermal Rabbit &gt;500</li> <li>LD50 Oral Rat &gt;500</li> <li>LD50 Oral Rat 7340</li> <li>LD50 Oral Rat 7340</li> <li>No known significant effects or critical hazards.</li> <li>Contains material that may cause target organ damage,</li> <li>Result Score Score</li> <li>Skin - Severe irritant Rabbit -</li> <li>Eyes - Severe irritant Rabbit -</li> <li>Eyes - Mild irritant Rabbit -</li> <li>May cause skin irritation. NOT EXPECTED TO PRODU HEALTH EFFECTS WHEN THE RECOMMENDED INS FOLLOWED.</li> <li>May cause eye irritation. NOT EXPECTED TO PRODUC HEALTH EFFECTS WHEN THE RECOMMENDED INS FOLLOWED.</li> </ul> | <ul> <li>There are no data available on the mixture itself. Teratogenicity not sus humans.</li> <li>There are no data available on the mixture itself. Not considered to be humans, according to our database.</li> <li>Result</li> <li>Species</li> <li>Dose</li> <li>LD50 Dermal</li> <li>Rat</li> <li>S5000 mg/kg</li> <li>LD50 Oral</li> <li>LD50 Oral</li> <li>Rat</li> <li>S5000 mg/kg</li> <li>LD50 Oral</li> <li>Rat</li> <li>S5000 mg/kg</li> <li>ID50 Oral</li> <li>Rat</li> <li>S5000 mg/kg</li> <li>S5000 mg/kg</li> <li>Contains material that may cause target organ damage, based on anim</li> <li>Result</li> <li>Score</li> <li>Score</li> <li>Exposure</li> <li>Skin - Severe irritant</li> <li>Rabbit</li> <li>Stin - Severe irritant</li> <li>Rabbit</li> <li>10 milligrams</li> <li>Eyes - Severe irritant</li> <li>Rabbit</li> <li>May cause skin irritation. NOT EXPECTED TO PRODUCE SIGNIFICA HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOLLOWED.</li> <li>May cause eye irritation. NOT EXPECTED TO PRODUCE SIGNIFICA HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOLLOWED.</li> </ul> |

Validated on 11/1/2012.

11/19

## 11. Toxicological information

| ACGIH                  | IARC   | EPA   | NIOSH  | NTP  | OSHA   |
|------------------------|--|---|--|--|--|
| -                      | 2A   | -   | -  | -  | -  |
| A2                     | 1  | -   | +  | Proven.  | -  |
|                        |  |   |  |  |  |
| : There are no humans. | data available   | e on the mixtu  | re itself. Mutage  | nicity not suspe   | ected for  |
|                        |  |   |  |  |  |
| : There are no humans. | data available   | e on the mixtu  | re itself. Teratog   | enicity not sus  | pected for   |
|                        |  |   |  |  |  |
|                        |  |   | re itself. Not con   | sidered to be c  | langerous to   |
|                        | <ul> <li>A2</li> <li>There are no humans.</li> <li>There are no humans.</li> <li>There are no humans.</li> <li>There are no humans.</li> </ul> | - 2A<br>A2 1      There are no data available<br>humans.      There are no data available<br>humans.      There are no data available | A2     A     A2     A2     A2     A | -       2A       -       -         A2       1       -       +         : There are no data available on the mixture itself. Mutager humans.       :       :         : There are no data available on the mixture itself. Teratog humans.       :       :         : There are no data available on the mixture itself. Teratog humans.       :       : | -       2A       -       -       -         A2       1       -       +       Proven.         : There are no data available on the mixture itself. Mutagenicity not suspendent on the mixture itself. Teratogenicity not suspendent on the mixture itself. Teratogenicity not suspendent on the mixture itself. Teratogenicity not suspendent on the mixture itself. Not considered to be on the mixture itself. |

## 12. Ecological information

Ecotoxicity

: Not readily biodegradable. Water polluting material. May be harmful to the environment if released in large quantities.

### United States

#### Aquatic ecotoxicity

| Product/ingredient name | Result                               | Species  | Exposure |
|-------------------------|--------------------------------------|--|----------|
| calcium dihydroxide     | Acute LC50 33884.4 µg/l Fresh water  | Fish - Clarias gariepinus -<br>Fingerling                                      | 96 hours |
| copper                  | Acute EC50 1100 µg/l Fresh water     | Aquatic plants - Lemna minor   | 4 days   |
|                         | Acute EC50 2.1 µg/l Fresh water      | Daphnia - Daphnia longispina -<br>Juvenile (Fledgling, Hatchling,<br>Weanling) | 48 hours |
|                         | Acute IC50 13 µg/l Fresh water       | Algae - Pseudokirchneriella<br>subcapitata - Exponential growth<br>phase       | 72 hours |
|                         | Acute IC50 5.4 mg/l Marine water     | Aquatic plants - Plantae -<br>Exponential growth phase                         | 72 hours |
|                         | Acute LC50 0.072 µg/l Marine water   | Crustaceans - Amphipoda - Adult  | 48 hours |
|                         | Acute LC50 7.56 µg/l Marine water    | Fish - Periophthalmus waltoni -<br>Adult                                       | 96 hours |
|                         | Chronic NOEC 2.5 µg/I Marine water   | Algae - Nitzschia closterium -<br>Exponential growth phase                     | 72 hours |
|                         | Chronic NOEC 7 mg/l Fresh water      | Aquatic plants - Ceratophyllum demersum  | 3 days   |
|                         | Chronic NOEC 0.02 mg/l Fresh water   | Crustaceans - Cambarus<br>bartonii - Mature                                    | 21 days  |
|                         | Chronic NOEC 2 µg/l Fresh water      | Daphnia - Daphnia magna  | 21 days  |
|                         | Chronic NOEC 0.8 µg/l Fresh water    | Fish - Oreochromis niloticus -<br>Juvenile (Fledgling, Hatchling,<br>Weanling) | 6 weeks  |
| sodium nitrite          | Acute EC50 159000 µg/l Marine water  | Algae - Tetraselmis chuii  | 72 hours |
|                         | Acute EC50 1600000 µg/l Marine water | Algae - Tetraselmis chuii  | 96 hours |
|                         | Acute LC50 1100 µg/l Fresh water     | Crustaceans - Cherax<br>quadricarinatus  | 48 hours |
|                         | Acute LC50 48 µg/l Fresh water       | Fish - Ictalurus punctatus -<br>Fingerling                                     | 96 hours |
|                         | Chronic NOEC 3.37 mg/l Fresh water   | Fish - Pimephales promelas -   | 30 days  |

| MSDS #: 1415             |  |  |          |  |  |  |  |
|--------------------------|--|--|----------|--|--|--|--|
| 2. Ecological info       | ormation                                   |  |          |  |  |  |  |
|                          |  | Juvenile (Fledgling, Hatchling, Weanling)                                      |          |  |  |  |  |
| onclusion/Summary        | : There are no data available on the mixt  | ture itself.   |          |  |  |  |  |
| ersistence/degradability |  |  |          |  |  |  |  |
| Conclusion/Summary       | : This product has not been tested for bid | odegradation. Not readily biodegrada   | able.    |  |  |  |  |
| nada                     |  | 3  |          |  |  |  |  |
| quatic ecotoxicity       |  |  |          |  |  |  |  |
| Product/ingredient name  | Result                                     | Species  | Exposure |  |  |  |  |
| alcium dihydroxide       | Acute LC50 33884.4 µg/l Fresh water        | Fish - Clarias gariepinus -  | 96 hours |  |  |  |  |
|                          |  | Fingerling   |          |  |  |  |  |
| opper                    | Acute EC50 1100 µg/l Fresh water           | Aquatic plants - Lemna minor   | 4 days   |  |  |  |  |
|                          | Acute EC50 2.1 µg/I Fresh water            | Daphnia - Daphnia longispina -   | 48 hours |  |  |  |  |
|                          |  | Juvenile (Fledgling, Hatchling,  |          |  |  |  |  |
|                          | Acute IC50 13 µg/l Fresh water             | Weanling)<br>Algae - Pseudokirchneriella                                       | 72 hours |  |  |  |  |
|                          |  | subcapitata - Exponential growth   | 12 nours |  |  |  |  |
|                          |  | phase  |          |  |  |  |  |
|                          | Acute IC50 5.4 mg/l Marine water           | Aquatic plants - Plantae -   | 72 hours |  |  |  |  |
|                          |  | Exponential growth phase   |          |  |  |  |  |
|                          | Acute LC50 0.072 µg/I Marine water         | Crustaceans - Amphipoda - Adult  | 48 hours |  |  |  |  |
|                          | Acute LC50 7.56 µg/l Marine water          | Fish - Periophthalmus waltoni -<br>Adult                                       | 96 hours |  |  |  |  |
|                          | Chronic NOEC 2.5 µg/l Marine water         | Algae - Nitzschia closterium -<br>Exponential growth phase                     | 72 hours |  |  |  |  |
|                          | Chronic NOEC 7 mg/l Fresh water            | Aquatic plants - Ceratophyllum demersum  | 3 days   |  |  |  |  |
|                          | Chronic NOEC 0.02 mg/l Fresh water         | Crustaceans - Cambarus<br>bartonii - Mature                                    | 21 days  |  |  |  |  |
|                          | Chronic NOEC 2 µg/l Fresh water            | Daphnia - Daphnia magna  | 21 days  |  |  |  |  |
|                          | Chronic NOEC 0.8 µg/l Fresh water          | Fish - Oreochromis niloticus -<br>Juvenile (Fledgling, Hatchling,<br>Weanling) | 6 weeks  |  |  |  |  |
| odium nitrite            | Acute EC50 159000 µg/l Marine water        | Algae - Tetraselmis chuii  | 72 hours |  |  |  |  |
|                          | Acute EC50 1600000 µg/l Marine water       | Algae - Tetraselmis chuii  | 96 hours |  |  |  |  |
|                          | Acute LC50 1100 µg/l Fresh water           | Crustaceans - Cherax<br>quadricarinatus  | 48 hours |  |  |  |  |
|                          | Acute LC50 48 µg/l Fresh water             | Fish - Ictalurus punctatus -<br>Fingerling                                     | 96 hours |  |  |  |  |
|                          | Chronic NOEC 3.37 mg/l Fresh water         | Fish - Pimephales promelas -<br>Juvenile (Fledgling, Hatchling,<br>Weanling)   | 30 days  |  |  |  |  |

Persistence/degradability

Ity
 This product has not been tested for biodegradation. Not readily biodegradable.

Conclusion/Summary

#### <u>Mexico</u>

Г

Aquatic ecotoxicity

### 12. Ecological information

| Product/ingredient name | Result                               | Species  | Exposure |
|-------------------------|--------------------------------------|--|----------|
| calcium dihydroxide     | Acute LC50 33884.4 µg/l Fresh water  | Fish - Clarias gariepinus -<br>Fingerling                                      | 96 hours |
| sodium nitrite          | Acute EC50 159000 µg/l Marine water  | Algae - Tetraselmis chuii  | 72 hours |
|                         | Acute EC50 1600000 µg/l Marine water | Algae - Tetraselmis chuii  | 96 hours |
|                         | Acute LC50 1100 µg/l Fresh water     | Crustaceans - Cherax<br>quadricarinatus  | 48 hours |
|                         | Acute LC50 48 µg/l Fresh water       | Fish - Ictalurus punctatus -<br>Fingerling                                     | 96 hours |
|                         | Chronic NOEC 3.37 mg/l Fresh water   | Fish - Pimephales promelas -<br>Juvenile (Fledgling, Hatchling,<br>Weanling)   | 30 days  |
| copper                  | Acute EC50 1100 µg/l Fresh water     | Aquatic plants - Lemna minor   | 4 days   |
|                         | Acute EC50 2.1 µg/l Fresh water      | Daphnia - Daphnia longispina -<br>Juvenile (Fledgling, Hatchling,<br>Weanling) | 48 hours |
|                         | Acute IC50 13 μg/l Fresh water       | Algae - Pseudokirchneriella<br>subcapitata - Exponential growth<br>phase       | 72 hours |
|                         | Acute IC50 5.4 mg/l Marine water     | Aquatic plants - Plantae -<br>Exponential growth phase                         | 72 hours |
|                         | Acute LC50 0.072 µg/l Marine water   | Crustaceans - Amphipoda - Adult  | 48 hours |
|                         | Acute LC50 7.56 µg/l Marine water    | Fish - Periophthalmus waltoni -<br>Adult                                       | 96 hours |
|                         | Chronic NOEC 2.5 µg/l Marine water   | Algae - Nitzschia closterium -<br>Exponential growth phase                     | 72 hours |
|                         | Chronic NOEC 7 mg/l Fresh water      | Aquatic plants - Ceratophyllum demersum  | 3 days   |
|                         | Chronic NOEC 0.02 mg/l Fresh water   | Crustaceans - Cambarus<br>bartonii - Mature                                    | 21 days  |
|                         | Chronic NOEC 2 µg/I Fresh water      | Daphnia - Daphnia magna  | 21 days  |
|                         | Chronic NOEC 0.8 µg/l Fresh water    | Fish - Oreochromis niloticus -<br>Juvenile (Fledgling, Hatchling,<br>Weanling) | 6 weeks  |

Conclusion/Summary

: This product has not been tested for biodegradation. Not readily biodegradable.

### 13. Disposal considerations

Waste disposal
 The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## 13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## 14. Transport information

| -                         |                   |                      |         |     |       | -   |
|---------------------------|-------------------|----------------------|---------|-----|-------|---|
| Regulatory<br>information | UN number         | Proper shipping name | Classes | PG* | Label | Additional<br>information   |
| DOT Classification        | Not<br>regulated. | -                    | -       | -   |       | Reportable quantity<br>10000 lbs / 4540 kg<br>Package sizes<br>shipped in quantities<br>less than the product<br>reportable quantity are<br>not subject to the RQ<br>(reportable quantity)<br>transportation<br>requirements. |
| TDG Classification        | Not<br>regulated. | <b>2</b> 7           | -       | -   |       | -   |
| Mexico<br>Classification  | Not<br>regulated. | -                    | -       | -   |       | -   |
| ADR/RID Class             | Not<br>regulated. | -                    | -       | -   |       | -   |
| IMDG Class                | Not<br>regulated. | -                    | -       | -   |       | -   |
| IATA-DGR Class            | Not<br>regulated. | -                    | -       | -   |       | -   |

PG\* : Packing group

## 15. Regulatory information

| United States            |   |
|--------------------------|---|
| HCS Classification       | : Irritating material<br>Carcinogen<br>Target organ effects   |
| U.S. Federal regulations | : TSCA 5(a)2 final significant new use rules: sodium nitrite  |
|                          | TSCA 8(a) IUR Exempt/Partial exemption: Not determined  |
|                          | TSCA 8(d) H and S data reporting: sodium nitrite  |
|                          | TSCA 12(b) one-time export: sodium nitrite  |
|                          | United States inventory (TSCA 8b): All components are listed or exempted.   |
|                          | SARA 302/304/311/312 extremely hazardous substances: No products were found.<br>SARA 302/304 emergency planning and notification: No products were found.<br>SARA 302/304/311/312 hazardous chemicals: copper; Natural graphite; calcium<br>dihydroxide; sodium nitrite   |
|                          | SARA 311/312 MSDS distribution - chemical inventory - hazard identification:<br>copper: Immediate (acute) health hazard; Natural graphite: Immediate (acute) health<br>hazard; calcium dihydroxide: Immediate (acute) health hazard, Delayed (chronic) health<br>hazard; sodium nitrite: Fire hazard, Immediate (acute) health hazard, Delayed (chronic)<br>health hazard |
| Validated on 11/1/2012   |   |

## 15. Regulatory information

#### Clean Water Act (CWA) 307: copper Clean Water Act (CWA) 311: sodium nitrite

| Clean Air Act Section 112<br>(b) Hazardous Air<br>Pollutants (HAPs) | 1 | Listed     |
|---|---|------------|
| Clean Air Act Section 602<br>Class I Substances                     | 1 | Not listed |
| Clean Air Act Section 602<br>Class II Substances                    | ; | Not listed |
| DEA List I Chemicals<br>(Precursor Chemicals)                       | : | Not listed |
| DEA List II Chemicals<br>(Essential Chemicals)                      | : | Not listed |

#### SARA 313

|                                 | Product name   | CAS number | Concentration |
|---------------------------------|----------------|------------|---------------|
| Form R - Reporting requirements | : copper       | 7440-50-8  | 10-20         |
|                                 | sodium nitrite | 7632-00-0  | 0.5-1.5       |
| Supplier notification           | : copper       | 7440-50-8  | 10-20         |
|                                 | sodium nitrite | 7632-00-0  | 0.5-1.5       |

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

#### State regulations

| Connecticut Carcinogen Reporting                        | : None of the components are listed.   |
|---|--|
| Connecticut Hazardous Material Survey                   | : None of the components are listed.   |
| Florida substances                                      | : None of the components are listed.   |
| Illinois Chemical Safety Act                            | : None of the components are listed.   |
| Illinois Toxic Substances Disclosure to Employee<br>Act | : None of the components are listed.   |
| Louisiana Reporting                                     | : None of the components are listed.   |
| Louisiana Spill   | : None of the components are listed.   |
| Massachusetts Spill                                     | : None of the components are listed.   |
| Massachusetts Substances                                | <ul> <li>The following components are listed: GRAPHITE<br/>(NATURAL)DUST; CALCIUM HYDROXIDE; COPPER;<br/>SODIUM NITRITE</li> </ul> |
| Michigan Critical Material                              | : None of the components are listed.   |
| Minnesota Hazardous Substances                          | : None of the components are listed.   |
| New Jersey Spill  | : None of the components are listed.   |
| New Jersey Toxic Catastrophe Prevention Act             | : None of the components are listed.   |
|   |  |

|  |   |   |   |                              | <b>MSDS # :</b> 1415                  |  |
|--|---|---|---|------------------------------|---------------------------------------|--|
| 15. Regulatory info  | ormation  | า   |   |                              |                                       |  |
| New Jersey Hazardous Substances                                |   | : The following components are listed: MINERAL OIL<br>(UNTREATED and MILDLY TREATED); GRAPHITE<br>(NATURAL); GRAPHITE; SILICA, QUARTZ; QUARTZ<br>(SiO2); MINERAL OIL (UNTREATED and MILDLY<br>TREATED); CALCIUM HYDROXIDE; HYDRATED LIME;<br>COPPER; SODIUM NITRITE; NITROUS ACID, SODIUM<br>SALT |   |                              |                                       |  |
| New York Acutely Hazardo                                       | us Substand   | ces   | : The following   | components are listed:       | Copper; Sodium nitrite                |  |
| New York Toxic Chemical  |   |   |   | omponents are listed.        |                                       |  |
| Pennsylvania RTK Hazardous Substances                          |   | ICES  | <ul> <li>The following components are listed: GRAPHITE;<br/>QUARTZ (SIO2); CALCIUM HYDROXIDE (CA(OH)2);<br/>COPPER FUME; NITROUS ACID, SODIUM SALT</li> </ul> |                              |                                       |  |
| Rhode Island Hazardous S                                       | ubstances   |   |   | omponents are listed.        |                                       |  |
| California Prop. 65  |   |   |   |                              |                                       |  |
| WARNING: This product co                                       | ntains a cher   | nical known to  | the State of Califo   | rnia to cause cancer.        |                                       |  |
| Ingredient name  |   | Cancer  | Reproductive  | No significant risk<br>level | Maximum<br>acceptable dosage<br>level |  |
| Quartz (SiO2)  |   | Yes.  | No.   | No.                          | No.                                   |  |
| United States inventory<br>(TSCA 8b)                           | : All compo   | nents are liste   | d or exempted.  |                              | 1                                     |  |
| <u>Canada</u>  |   |   |   |                              |                                       |  |
| WHMIS (Canada)   | : Class D-2A: Material causing other toxic effects (Very toxic).<br>Class E: Corrosive material |   |   |                              |                                       |  |
| Canadian lists   | 12712201 #211124  | 22  |   |                              |                                       |  |
| Canadian NPRI  |   |   | nts are listed: Coppe   | er; Sodium nitrite           |                                       |  |
| CEPA Toxic substances  |   |   |   |                              |                                       |  |
| NDSL   | L/ : All components are listed or exempted.   |   |   |                              |                                       |  |
| This product has been classif<br>and the MSDS contains all the |   |   |   |                              | lucts Regulations                     |  |
| Mexico   |   |   |   |                              |                                       |  |
| Classification   | :   |   |   |                              |                                       |  |
|  |   | FI  | lammability   |                              |                                       |  |
|  | Healt   | n <b>1 0</b>  | Reactivity  |                              |                                       |  |
|  |   | s s   | pecial  |                              |                                       |  |
| nternational regulations                                       |   | ~   |   |                              |                                       |  |
| nternational regulations                                       |   | inventer / Al   |   | to one listed as success     |                                       |  |
| International lists  | China inv<br>Japan inv<br>Korea inv<br>Malaysia   | entory (IECS)<br>entory: Not de<br>entory: All con  | C): All components<br>etermined.<br>mponents are listed<br><b>IS Register</b> ): Not d  |                              |                                       |  |

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted. Philippines inventory (PICCS): All components are listed or exempted. Taiwan inventory (CSNN): Not determined.

Europe inventory : All components are listed or exempted.

| 15. Regulatory info   | : Not listed  |
|---|---|
| Convention List Schedule<br>I Chemicals                       |   |
| Chemical Weapons<br>Convention List Schedule<br>II Chemicals  | : Not listed  |
| Chemical Weapons<br>Convention List Schedule<br>III Chemicals | : Not listed  |
| 16. Other informat  | ion   |
| Label requirements  | : CAUSES EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE<br>TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD -<br>CONTAINS MATERIAL WHICH CAN CAUSE CANCER. |
| Hazardous Material<br>Information System (U.S.A.)             | :<br>Health   |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

:

Flammability

Physical hazards

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

| Date of issue  | : | 11/1/2012.                           |  |  |
|--|---|--------------------------------------|--|--|
| Date of previous issue   | : | 11/1/2012.                           |  |  |
| Version  | : | 1.01                                 |  |  |
| Prepared by  | : | Regulatory Department, Chemtool Inc. |  |  |
| Indicates information that has changed from previously issued version. |   |                                      |  |  |

### 16. Other information

#### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.