# Safety Data Sheet

## Prepared in Accordance with HCS 29 C.F.R. 1910.1200

## 1. Identification of the Substance/Mixture and the Company/Undertaking

**1.1 Product Identifier** R375B1NL

**Product Name:** SP-3888 CARTRIDGE HARDENER

**Revision Date:** 12/05/2022

**Supercedes Date:** 10/21/2022

**1.2 Relevant identified uses of the substance or mixture and uses advised against** Component of multicomponent industrial coatings - Industrial use.

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

**Manufacturer :**

Specialty Polymer Coatings Division
Carboline Global Inc.
2150 Schuetz Road
St. Louis, Mo. 63146

Regulatory / Technical Information:
604-514-9711

**Datasheet Produced by:** Schlereth, Ken - regulatory@carboline.com

**1.4 Emergency telephone number:**

CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)
HEALTH - Pittsburgh Poison Control 1-412-681-6669

## 2. Hazard Identification

**2.1 Classification of the substance or mixture**

Acute Toxicity, Dermal, category 4
Acute Toxicity, Inhalation, category 4
Acute Toxicity, Oral, category 4
Hazardous to the aquatic environment, Chronic, category 2
Carcinogenicity, category 1A
Reproductive_ToxicityF_category_1B
STOT, repeated exposure, category 1
Skin Corrosion, category 1
Skin Sensitizer, category 1

## 2.2 Label elements

**Symbol(s) of Product**



**Signal Word**

Danger

**Named Chemicals on Label**

4,4'-ISOPROPYLIDENEDIPHENOL, BENZYL ALCOHOL, 2-PIPERAZIN-1-YLETHYLAMINE, 1,2-CYCLOHEXANEDIAMINE, PENTAETHYLENEHEXAMINE MIXTURE, MICROCRYSTALLINE SILICA, DIMETHYLAMINO(METHYL)PHENOL, POLYETHYLENE POLYAMINES, 4-NONYL PHENOL, BRANCHED

**HAZARD STATEMENTS**

| | | |
|---|---|---|
| Acute Toxicity, Oral, category 4 | H302 | Harmful if swallowed. |
| Acute Toxicity, Dermal, category 4 | H312 | Harmful in contact with skin. |
| Skin Corrosion, category 1 | H314-1 | Causes severe skin burns and eye damage. |
| Skin Sensitizer, category 1 | H317 | May cause an allergic skin reaction. |
| Acute Toxicity, Inhalation, category 4 | H332 | Harmful if inhaled. |
| Carcinogenicity, category 1A | H350-1A | May cause cancer. |
| Reproductive_ToxicityF_category_1B | H360F | May damage fertility. |
| STOT, repeated exposure, category 1 | H372 | Causes damage to organs through prolonged or repeated exposure. |
| Hazardous to the aquatic environment, Chronic, category 2 | H411 | Toxic to aquatic life with long lasting effects. |

**PRECAUTION PHRASES**

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P264 | Wash hands thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/ face protection. |
| P284 | Wear respiratory protection. |
| P301+310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. |
| P301+330+331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P302+352 | IF ON SKIN: Wash with plenty of soap and water. |
| P304+340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305+351+338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. |
| P308+313 | IF exposed or concerned: Get medical advice/attention |
| P308+P313 | IF exposed or concerned: Get medical advice/attention |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P314 | Get medical advice/attention if you feel unwell. |
| P333+313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P352 | Wash with plenty of soap and water. |
| P363 | Wash contaminated clothing before reuse. |
| P391 | Collect spillage. |

### 2.3 Other hazards
No Information

**Results of PBT and vPvB assessment:**
The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

## 3. Composition/Information On Ingredients

### 3.2 Mixtures

**Hazardous ingredients**

| Name According to EEC | EINEC No. | CAS-No. | % | Classifications | |
|---|---|---|---|---|---|
| MICROCRYSTALLINE SILICA | 238-878-4 | 14808-60-7 | 25 - <50 | H350-372 | Carc. 1A, STOT RE 1 |
| 1,2-CYCLOHEXANEDIAMINE | 211-776-7 | 694-83-7 | 10 - <25 | H302-312-314-317 | Acute Tox. 4 Dermal, Acute Tox. 4 Oral, Skin Corr. 1, Skin Sens. 1 |
| BENZYL ALCOHOL | 202-859-9 | 100-51-6 | 10 - <25 | H302-312-319-332 | Acute Tox. 4 Dermal, Acute Tox. 4 Inhalation, Acute Tox. 4 Oral, Eye Irrit. 2 |
| 2-PIPERAZIN-1-YLETHYLAMINE | 205-411-0 | 140-31-8 | 10 - <25 | H302-312-314-317-412 | Acute Tox. 4 Dermal, Acute Tox. 4 Oral, Aquatic Chronic 3, Skin Corr. 1, Skin Sens. 1 |
| 4,4'-ISOPROPYLIDENEDIPHENOL | 201-245-8 | 80-05-7 | 2.5 - <10 | H317-318-335-360F-400-410 | Aquatic Acute 1, Aquatic Chronic 1, Eye Dam. 1, Repr. 1B, Skin Sens. 1, STOT SE 3 RTI |
| 4-NONYL PHENOL, BRANCHED | 284-325-5 | 84852-15-3 | 2.5 - <10 | H302-314-361FD-400-410 | Acute Tox. 4 Oral, Aquatic Acute 1, Aquatic Chronic 1, Repr. 2, Skin Corr. 1 |
| POLYETHYLENE POLYAMINES | 268-626-9 | 68131-73-7 | 1.0 - <2.5 | H302-312-314-317-400-410 | Acute Tox. 4 Dermal, Acute Tox. 4 Oral, Aquatic Acute 1, Aquatic Chronic 1, Skin Corr. 1, Skin Sens. 1 |
| PENTAETHYLENEHEXAMINE MIXTURE | 223-775-9 | 4067-16-7 | 1.0 - <2.5 | H302-312-314-317-410 | |
| DIMETHYLAMINO (METHYL)PHENOL | 246-866-5 | 25338-55-0 | 1.0 - <2.5 | H302-312-314-332 | |
| CARBON BLACK | 215-609-9 | 1333-86-4 | 0.1 - <1.0 | | |

| CAS-No. | M-Factors |
|---|---|
| 14808-60-7 | 0 |
| 694-83-7 | 0 |
| 100-51-6 | 0 |
| 140-31-8 | 0 |
| 80-05-7 | 0 |
| 84852-15-3 | 0 |
| 68131-73-7 | 0 |
| 4067-16-7 | 0 |
| 25338-55-0 | 0 |
| 1333-86-4 | 0 |

**Additional Information:** The text for GHS Hazard Statements shown above (if any) is given in Section 16.

## 4. First-aid Measures

### 4.1 Description of First Aid Measures

**AFTER INHALATION:** Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.
**AFTER SKIN CONTACT:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.
**AFTER EYE CONTACT:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
**AFTER INGESTION:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

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

Causes burns. May cause sensitization by skin contact. May be harmful if swallowed. Corrosive after repeated contact with skin and mucous membranes.

### 4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required.
When symptoms persist or in all cases of doubt seek medical advice.

## 5. Fire-fighting Measures

### 5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Vapors may spread long distances and ignite.

**FOR SAFETY REASONS NOT TO BE USED:** No Information

### 5.2 Special hazards arising from the substance or mixture

No Information

### 5.3 Advice for firefighters

SPECIAL FIREFIGHTING PROCEDURES: In the event of fire, wear self-contained breathing apparatus. Evacuate personnel to safe areas. Use NIOSH approved respiratory protection. Use water spray to cool unopened containers.

SPECIAL FIREFIGHTING PROTECTION EQUIPMENT: No Information

## 6. Accidental Release Measures

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

Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. For personal protection see section 8.

### 6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

### 6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

### 6.4 Reference to other sections

No Information

## 7. Handling and Storage

### 7.1 Precautions for safe handling

**INSTRUCTIONS FOR SAFE HANDLING :** Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Do not breathe vapours or spray mist. Ensure all equipment is electrically grounded before beginning transfer operations. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection. Wash thoroughly after handling.
**PROTECTION AND HYGIENE MEASURES :** Handle in accordance with good industrial hygiene and safety practice. Wash

hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

**CONDITIONS TO AVOID:** Heat, flames and sparks.
**STORAGE CONDITIONS:** Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

### 7.3 Specific end use(s)

No specific advice for end use available.

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

**Ingredients with Occupational Exposure Limits (US)**

| Name | CAS-No. | ACGIH TWA | ACGIH STEL | ACGIH Ceiling |
|---|---|---|---|---|
| MICROCRYSTALLINE SILICA | 14808-60-7 | 0.025 MGM3 | N/E | N/E |
| 1,2-CYCLOHEXANEDIAMINE | 694-83-7 | N/E | N/E | N/E |
| BENZYL ALCOHOL | 100-51-6 | N/E | N/E | N/E |
| 2-PIPERAZIN-1-YLETHYLAMINE | 140-31-8 | N/E | N/E | N/E |
| 4,4'-ISOPROPYLIDENEDIPHENOL | 80-05-7 | N/E | N/E | N/E |
| 4-NONYL PHENOL, BRANCHED | 84852-15-3 | N/E | N/E | N/E |
| POLYETHYLENE POLYAMINES | 68131-73-7 | N/E | N/E | N/E |
| PENTAETHYLENEHEXAMINE MIXTURE | 4067-16-7 | N/E | N/E | N/E |
| DIMETHYLAMINO(METHYL)PHENOL | 25338-55-0 | N/E | N/E | N/E |
| CARBON BLACK | 1333-86-4 | 3 MGM3 | N/E | N/E |

| Name | CAS-No. | OSHA PEL | OSHA STEL |
|---|---|---|---|
| MICROCRYSTALLINE SILICA | 14808-60-7 | 0.05 MGM3 | N/E |
| 1,2-CYCLOHEXANEDIAMINE | 694-83-7 | N/E | N/E |
| BENZYL ALCOHOL | 100-51-6 | N/E | N/E |
| 2-PIPERAZIN-1-YLETHYLAMINE | 140-31-8 | N/E | N/E |
| 4,4'-ISOPROPYLIDENEDIPHENOL | 80-05-7 | N/E | N/E |
| 4-NONYL PHENOL, BRANCHED | 84852-15-3 | N/E | N/E |
| POLYETHYLENE POLYAMINES | 68131-73-7 | N/E | N/E |
| PENTAETHYLENEHEXAMINE MIXTURE | 4067-16-7 | N/E | N/E |
| DIMETHYLAMINO(METHYL)PHENOL | 25338-55-0 | N/E | N/E |
| CARBON BLACK | 1333-86-4 | 3.5 MGM3 | N/E |

**FURTHER ADVICE:** Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation.

### 8.2 Exposure controls

**Personal Protection**

**RESPIRATORY PROTECTION:** In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

**EYE PROTECTION:** Safety glasses with side-shields.

**HAND PROTECTION:** Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious gloves. Request information on glove permeation properties from the glove supplier. Lightweight protective clothing

**OTHER PROTECTIVE EQUIPMENT:** Ensure that eyewash stations and safety showers are close to the workstation location.

**ENGINEERING CONTROLS:** Avoid contact with skin, eyes and clothing. Use only in an area equipped with explosion proof exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance:** | Viscous Liquid |
| **Physical State** | Liquid |
| **Odor** | Mild |
| **Odor threshold** | Not Determined |
| **pH** | Not Determined |
| **Melting point / freezing point (°C)** | Not Determined |
| **Boiling point/range (°C)** | 182 F (83 C) - 531 F (277 C) |
| **Flash Point (°C)** | 201°F (93°C) |
| **Evaporation rate** | Slower Than Ether |
| **Flammability (solid, gas)** | N/D |
| **Upper/lower flammability or explosive limits** | 1.3 - 13.0 |
| **Vapour Pressure, mmHg** | Not Determined |
| **Vapour density** | Heavier than Air |
| **Relative density** | N/D |
| **Solubility in / Miscibility with water** | Not Determined |
| **Partition coefficient: n-octanol/water** | N/D |
| **Auto-ignition temperature (°C)** | N/D |
| **Decomposition temperature (°C)** | N/D |
| **Viscosity** | Not Determined |
| **Explosive properties** | N/D |
| **Oxidising properties** | N/D |

### 9.2 Other information

| | |
|---|---|
| **VOC Content g/l:** | 0 |
| **Specific Gravity (g/cm3)** | 1.4 |

## 10. Stability and Reactivity

**10.1 Reactivity**
No reactivity hazards known under normal storage and use conditions.

**10.2 Chemical stability**
Stable under normal conditions.

**10.3 Possibility of hazardous reactions**
Hazardous polymerisation does not occur.

**10.4 Conditions to avoid**
Heat, flames and sparks.

**10.5 Incompatible materials**
Strong oxidizing agents.

**10.6 Hazardous decomposition products**
Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

## 11. Toxicological Information

**11.1 Information on toxicological effects**

**Acute Toxicity:**

**Oral LD50:** N/D

**Inhalation LC50:** N/D

**Irritation:** Unknown

**Corrosivity:** Skin Corrosion, category 1

**Sensitization:** Skin Sensitizer, category 1

**Repeated dose toxicity:** Unknown

**Carcinogenicity:** Carcinogenicity, category 1A

**Mutagenicity:** Unknown

**Toxicity for reproduction:** Reproductive Toxicity, category 1A

**STOT-single exposure:** Unknown

**STOT-repeated exposure:** STOT, repeated exposure, category 1

**Aspiration hazard:** Unknown

**If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:**

| CAS-No. | Chemical Name | Oral LD50 | Dermal LD50 | Vapor LC50 | Gas LC50 | Dust/Mist LC50 |
|---|---|---|---|---|---|---|
| 14808-60-7 | MICROCRYSTALLINE SILICA | 22500 mg/kg | Not Available | Not Available | 0.000 | 0.000 |
| 694-83-7 | 1,2-CYCLOHEXANEDIAMINE | 1170 mg/kg, rat, oral | 1870 mg/kg, dermal, rat | Not Available | 0.000 | 0.000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 100-51-6 | BENZYL ALCOHOL | 1230 mg/kg rat, oral | 2000 mg/kg, dermal, rabbit | 4176 mg/l / 4h, Inh, Rat | | |
| 140-31-8 | 2-PIPERAZIN-1-YLETHYLAMINE | Not Available | Not Available | Not Available | 0.000 | 0.000 |
| 80-05-7 | 4,4'-ISOPROPYLIDENEDIPHENOL | 11400 mg/kg, oral, rat | Not Available | Not Available | 0.000 | 0.000 |
| 84852-15-3 | 4-NONYL PHENOL, BRANCHED | 1620 mg/kg oral | | Not Available | 0.000 | 0.000 |
| 4067-16-7 | PENTAETHYLENEHEXAMINE MIXTURE | Not Available | Not Available | Not Available | Not Available | Not Available |
| 25338-55-0 | DIMETHYLAMINO(METHYL) PHENOL | 500 mg/kg, oral, rat | | 20 mg/L/ 1 hr. rat | 0.000 | 0.000 |
| 1333-86-4 | CARBON BLACK | 8000 mg/kg oral, rat | Not Available | Not Available | | |

**Additional Information:**

Constituents of this product may include crystalline silica which, if inhalable, may cause silicosis, a form or progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group 1 carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a known human carcinogen. This classification is relevant when exposed to Quartz (silicon dioxide) in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities. Constituents may also include abestiform or non-asbestiform tremolite or other silicates as impurities, and above dei minimus exposure to these impurities in inhalable form may be carcinogenic or cause other serious lung problems.

## 12. Ecological Information

**12.1 Toxicity:**

**EC50 48hr (Daphnia):** No information available.

**IC50 72hr (Algae):** No information available.

**LC50 96hr (fish):** No information available.

**12.2 Persistence and degradability:** No information available.

**12.3 Bioaccumulative potential:** No information available.

**12.4 Mobility in soil:** No information available.

**12.5 Results of PBT and vPvB assessment:** The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

**12.6 Other adverse effects:** No information available.

| CAS-No. | Chemical Name | EC50 48hr | IC50 72hr | LC50 96hr |
|---|---|---|---|---|
| 14808-60-7 | MICROCRYSTALLINE SILICA | No information | No information | No information |
| 694-83-7 | 1,2-CYCLOHEXANEDIAMINE | 19.8 mg/l (Daphnia) | 29.6 mg/l (Algae) | No information |
| 100-51-6 | BENZYL ALCOHOL | 230 mg/l (Daphnia) | 700 mg/l (Algae) | 10 mg/l (Fish) |
| 140-31-8 | 2-PIPERAZIN-1-YLETHYLAMINE | No information | No information | No information |
| 80-05-7 | 4,4'-ISOPROPYLIDENEDIPHENOL | No information | No information | No information |
| 84852-15-3 | 4-NONYL PHENOL, BRANCHED | No information | No information | No information |
| 68131-73-7 | POLYETHYLENE POLYAMINES | No information | No information | No information |
| 4067-16-7 | PENTAETHYLENEHEXAMINE MIXTURE | No information | No information | No information |
| 25338-55-0 | DIMETHYLAMINO(METHYL)PHENOL | No information | No information | No information |

| | | | | |
|---|---|---|---|---|
| 1333-86-4 | CARBON BLACK | No information | No information | No information |

## 13. Disposal Considerations

**13.1 WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport Information

| | | |
|---|---|---|
| **14.1** | **UN number** | UN2735 |
| **14.2** | **UN proper shipping name** | Amines, Liquid, Corrosive, NOS |
| | **Technical name** | (Aminoethylpiperazine) |
| **14.3** | **Transport hazard class(es)** | 8 |
| | **Subsidiary shipping hazard** | N/A |
| **14.4** | **Packing group** | PGIII |
| **14.5** | **Environmental hazards** | No information available. |
| **14.6** | **Special precautions for user** | No information available. |
| | **EmS-No.:** | N/A |
| **14.7** | **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code** | No information available. |

## 15. Regulatory Information

**15.1 Safety, health and environmental regulations/legislation for the substance or mixture:**

## U.S. Federal Regulations: As follows -

### CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Carcinogenicity, Acute Toxicity (any route of exposure), Reproductive toxicity, Skin Corrosion or Irritation, Respiratory or Skin Sensitization, Specific target organ toxicity (single or repeated exposure)

### Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

| Chemical Name | CAS-No. | % |
|---|---|---|
| 4,4'-ISOPROPYLIDENEDIPHENOL | 80-05-7 | 6.37 |
| 4-NONYL PHENOL, BRANCHED | 84852-15-3 | 2.84 |

### Toxic Substances Control Act:

All components of this product are either listed on the TSCA Inventory or are exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

## U.S. State Regulations: As follows -

### New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

| Chemical Name | CAS-No. |
|---|---|

No NJ Right-To-Know components exist in this product.

### Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

| Chemical Name | CAS-No. |
|---|---|
| POLYAMINE | TRADE SECRET |

### CALIFORNIA PROPOSITION 65

WARNING: Cancer and Reproductive Harm -- www.P65Warnings.ca.gov

## International Regulations: As follows -

### * Canadian DSL:

All chemical ingredients included on inventory (DSL)

**15.2 Chemical Safety Assessment:**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## 16. Other Information

**Text for GHS Hazard Statements shown in Section 3 describing each ingredient:**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H350 | May cause cancer. |
| H360F | May damage fertility. |
| H361FD | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Reasons for revision**

No Information

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.