

SAFETY DATA SHEET



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| DATE ISSUED : | 4/27/2016 |
| SDS REF. No : | 6460-4702 |

6460-4702 H/S POLY GRAY PRIMER

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 6460-4702 H/S POLY GRAY PRIMER

PRODUCT CODE: 6460-4702

PRODUCT USE: Industrial Solventborne Primer

MANUFACTURER

Cardinal Industrial Finishes
1329 Potrero Ave

S. El Monte, CA,
626 444-9274

24 HR. EMERGENCY TELEPHONE NUMBER

CHEMTREC (US Transportation): (800)424-9300

CHEMTREC (International : 1(202)483-7616

Transportation)

WEB: WWW.CARDINALPAINT.COM

2. HAZARDS IDENTIFICATION

PICTOGRAMS



SIGNAL WORD : DANGER

HAZARD STATEMENTS :

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

PRECAUTIONARY STATEMENTS :

P233 Keep container tightly closed.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P403 Store in a well-ventilated place.

P501 Dispose of in accordance with Local, Regional, State, Federal and International Regulations.

R40 Limited evidence of a carcinogenic effect.

S36 Wear suitable protective clothing.

S37 Wear suitable gloves.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | Weight % | CAS Number | |
|---------------------------|-----------|------------|--|
| n-Butyl Acetate | 15% - 20% | 123-86-4 | |
| Zinc Phosphate (Zinc 72%) | 10% - 15% | 7779-90-0 | |

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|---------------------|----------|------------|--|
| Titanium Dioxide | 5% - 10% | 13463-67-7 | |
| Methyl Amyl Ketone | 1% - 5% | 110-43-0 | |
| Methyl Ethyl Ketone | 1% - 5% | 78-93-3 | |

4. FIRST AID MEASURES

Description of first and measures.

EYES CONTACT : Flush with large quantities of water for 15 to 30 minutes. Remove contact lenses. Keep eyes wide open while rising. If eye irritation persists: Get medical attention.

SKIN CONTACT : Wash exposed area with mild soap and water for 15 to 30 minutes. Remove contaminated clothing. Repeated exposure may cause dryness or cracking.

INGESTION : Rinse mouth. Do NOT induce vomiting. Keep victim warm and seek immediate attention.

INHALATION : Remove to fresh air and keep in a position comfortable to breath. Call a doctor/physician if you feel unwell. Get medical attention.

Most important symptoms and effects, both acute and delayed. Symptoms/injuries: Eye irritation

Symptoms/injuries after inhalation: May cause drowsiness or dizziness.

Symptoms/injuries after eye contact: Cause serious eye irritation.

Symptoms/injuries after ingestion: Ingestion may cause nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed.

If medical advice is needed, have product container or label on hand.

5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : In the event of a fire, use specifically suitable extinguishing agents. Suitable extinguishing media: Foam, alcohol resistant foam, CO₂, water fog. Unsuitable extinguishing media: Do not use heavy water stream. A heavy water stream may spread burning liquid.

FIRE FIGHTING PROCEDURE : Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering the environment.

Protection during firefighting: Firefighters should wear full protective gear. Do not enter fire area without proper protective equipment, including self-contained breathing apparatus with full face piece operated in pressure demand or other positive pressure modes.

UNUSUAL FIRE AND EXPLOSION HAZARD : Fire hazard: Highly flammable/liquid or vapor.

Explosive hazard: May form flammable/explosive vapor-air mixture.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES :

General measures: Remove ignition sources. Use special care to avoid static electric charges. No smoking.

FOR NON-EMERGENCY PERSONNEL :

For non-Emergency procedures: Evacuate unnecessary personnel.

FOR EMERGENCY RESPONDERS :

Equip cleanup crew with proper protection. Avoid breathing fume, vapors.

ENVIRONMENTAL PRECAUTIONS :

Prevent entry to sewers and public waters.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP :

Collect damaged aerosols and use absorbent and/or inert material, then place in suitable container.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING : Additional hazards when processed: Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when you are leaving work. Provide good ventilation in process area to prevent formation of vapor. No smoking. Use only non-sparking tools. Use outdoors or in a well ventilated area. Avoid breathing fume, vapors. Hygiene measures: Wash Skin thoroughly after handling.

CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES : Storage conditions: Store in a dry, cool and well-ventilated place away from: Heat sources. Direct sunlight.

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Source of ignition. Direct sunlight. Heat Sources.

8. EXPOSURE CONTROLS\PERSONAL PROTECTION

| | | |
|---|------------------------------------|-------------------------------------|
| Amorphous Fumed Silica(112945-52-5) | | |
| Time Weighted Average (TWA):(CAD AB OEL) Total dust. | Time Weighted Average (TWA) | 4 mg/m ³ |
| Time Weighted Average (TWA):(CAD AB OEL) Total dust. | Time Weighted Average (TWA) | 5 mg/m ³ |
| Time Weighted Average (TWA):(CAD AB OEL) Respirable dust. | Time Weighted Average (TWA) | 1.5 mg/m ³ |
| Time Weighted Average (TWA):(CAD AB OEL) Respirable dust. | Time Weighted Average (TWA) | 2 mg/m ³ |
| Carbon Black(1333-86-4) | | |
| USA ACGIH | ACGIH TLV (mg/m ³) | 3.0 mg/m ³ |
| USA OSHA | OSHA PEL (mg/m ³) | 3.5 mg/m ³ |
| Crystalline Silica(14808-60-7) | | |
| USA ACGIH | ACGIH (TLV) TWA | .025 mg/m ³ |
| Methyl Amyl Ketone(110-43-0) | | |
| USA ACGIH | ACGIH TLV TWA | 50 ppm |
| USA OSHA | OSHA PEL (Table Z-1) | 100 ppm, 465 mg/m ³ |
| Methyl Ethyl Ketone(78-93-3) | | |
| USA ACGIH | ACGIH STEL (ppm) | 300 ppm |
| USA ACGIH | ACGIH TWA (ppm) | 200 ppm |
| USA OSHA | OSHA PEL (STEL) (ppm) | 100 ppm |
| USA OSHA | OSHA PEL TWA (mg/m ³) | 410 mg/m ³ |
| n-Butyl Acetate(123-86-4) | | |
| USA ACGIH | ACGIH STEL | 200 ppm |
| USA ACGIH | ACGIH TWA | 150 ppm |
| USA OSHA | OSHA PEL (Table Z-1) | 150 ppm, 710 mg/m ³ |
| TALC(14807-96-6) | | |
| USA ACGIH | ACGIH (TLV) TWA | 2 mg/m ³ |
| USA NIOSH | NIOSH (REL) TWA | 2 mg/m ³ |
| USA OSHA | OSHA (Table Z-3) Mineral Dusts TWA | 20 Million particles per cubic foot |
| Titanium Dioxide(13463-67-7) | | |
| PEL (Permissible Exposure Limit) | OSHA TWA | 15 mg/m ³ |
| TLV | ACGIH TWA | 10 mg/m ³ |

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION : If TLV of the product or any component is exceeded, a NIOSH approved dust respirator is advised in absence of environmental control. OSHA Regulations also permit other NIOSH dust respirators under specified conditions. (See your Safety Equipment Supplier) Engineering or administrative controls should be implemented to reduce exposure.

HAND PROTECTION REMARKS : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

EYES PROTECTION : Eye wash bottle with pure water.
Tightly fitting safety goggles.
Where face-shield and protective suit for abnormal processing problems.

SKIN AND BODY PROTECTION : Wear impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

WORK HYGIENIC PRACTICES: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

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| Physical state | : | Liquid |
| Color | : | Various colors depending on the pigmentation. |
| Odor | : | Chartistic. Sweet. Mint like. |
| Odor threshold | : | No data available. |
| Ph | : | N/A – See Technical Data Sheet |
| Evaporation rate | : | Slower Than Ether |
| Melting point | : | -94.7 C (-138.46 F) |
| Freezing point | : | No data available. |
| Boiling point | : | 175.0 deg F TO 305.0 deg F |
| Flash point | : | 24.00 deg F deg F |
| Lower explosion limit | : | 1.1 |
| Upper explosion limit | : | 11.0 |
| Vapour pressure | : | 185 mm Hg |
| Vapour density | : | Heavier than air |
| Relative density | : | No data available. |
| Density | : | 14.4114 |
| Solubility | : | No data available. |
| Partion coefficient: n-octanol/water | : | No data available. |
| Autoignition temperature | : | No data available. |
| Decomposition temperature | : | No data available. |

10. STABILITY AND REACTIVITY

REACTIVITY : No dangerous reaction known under conditions of normal use.

CHEMICAL STABILITY : Stable under normal conditions.

CONDITIONS TO AVOID : Heat, flames and sparks. Extremely high temperatures and direct sunlight.

INCOMPATIBLE MATERIALS : Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

11. TOXICOLOGICAL INFORMATION

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| Amorphous Fumed Silica(112945-52-5) | |
| Carcinogenicity | No evidence that cancer may be caused. |
| Eye irritation | Rabbit not irritating Method: analogy OECD-method |
| Genotoxicity in vitro | Silicon dioxide, chemically prepared 112945-52-5 no evidence of mutagenic effects. |
| Genotoxicity in vivo | Silicon dioxide, chemically prepared 112945-52-5 no evidence of mutagenic effects. |
| Human experience | Silicosis or other product specific illnesses of the respiratory tract were not observed in association with the product. |
| LC0 Rat | 0.139 mg/l / 4 h Method: analogy OECD-method (maximum concentration attainable in experiments) No deaths occurred. |
| LC50 Rat | > 5000 mg/kg Method: OECD Test Guideline 401 comparable product. |
| LD50 Rabbit | > 5000 mg/kg comparable product. |
| LD50 Rat | > 3300 mg/kg No deaths occurred. |
| Mutagenicity assessment | No evidence of mutagenic effects. |
| Repeated dose toxicity | Silicon dioxide, chemically prepared 112945-52-5 Oral no evidence for hazardous properties literature Silicon dioxide, chemically prepared 112945-52-5 Inhalative No irreversible changes and no indication of silicosis,. |
| Sensitization | Not known. |
| Skin irritation | Rabbit not irritating Method: analogy OECD-method. |
| Toxicity to reproduction | No evidence of reproduction toxic properties. |
| Amorphous Silica(7631-86-9) | |
| Additional toxicological information | The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and information provided to us. |

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| Irritant of skin | Not irritating (rabbit) (OCED 404) |
| Irritant of eyes | Not irritating (rabbit) (OCED 405) |
| LC0 - Inhalative | >140->2000 mg/m ³ / 4 h (Rat) (OCED 403) |
| LD50 - Dermal - Rabbit | >5000 mg/kg (Rabbit) |
| LD50 - Oral - Rat | >5000 mg/kg (Rat) (OECD 401) |
| Other information - Oral | => 1340 mg/kg/day |
| Sensitization | Not sensitizing (guinea pig) (OCED 406) |
| Carbon Black(1333-86-4) | |
| ACGIH | ACGIH The American Conference of Governmental Industrial Hygienists classifies carbon black as A4, Not Classifiable as a Human Carcinogen. |
| Carcinogenicity Classification | GHS- Not a hazardous substance or preparation according to the Global Harmonized System (GHS). |
| Human Epidemiology | Results of epidemiological studies of carbon black production workers suggest that cumulative exposure to carbon black may result in small decrements in lung function, as measured by FEV1. A recent U.S. respiratory morbidity study suggested a 27 mL decline in FEV1 from a 1 mg/m ³ (inhalable fraction) exposure over a 40-year period. An older European investigation suggested an exposure to 1 mg/m ³ (inhalable fraction) of carbon black over a 40-year working-lifetime will result in a 48 mL decline in FEV1. In contrast, normal age related decline over a similar period of time would be approximately 1200 ml. The relationship between symptoms and exposure to carbon black is less clear. In the U.S. study, 9% of the highest exposure group (in contrast to 5% of the unexposed group) reported symptoms consistent with chronic bronchitis. In the European study, methodological limitations in the administration of the questionnaire limit the drawing of definitive conclusions about symptoms. |
| Human Epidemiology - cont | Since this IARC evaluation of carbon black, Sorahan and Harrington 16) re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and McCunney 17-18) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington 16). |
| Human Epidemiology - cont. | Morfeld and McCunney 19) applied a Bayesian approach to unravel the role of uncontrolled confounders and identified smoking and prior exposure to occupational carcinogens received before being hired in the carbon black industry as main causes of the observed lung cancer excess risk. Overall, as a result of these detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated. This view is consistent with the IARC evaluation in 2006. Several epidemiological and clinical studies of workers in the carbon black production industries show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black. No dose response relationship was observed in workers exposed to carbon black. |
| Human Epidemiology - cont. | This study, however, indicated a link between carbon black and small opacities on chest films, with negligible effects on lung function. A study on carbon black production workers in the UK 10) found an increased risk of lung cancer in two of the five plants studied; however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant 11-14) found a similar increase in lung cancer risk but, like the 2001 UK study 10), found no association with carbon black exposure. In contrast, a large US study 15) of 18 plants showed a reduction in lung cancer risk in carbon black production workers. Based upon these studies, the February 2006 Working Group at IARC concluded that the human evidence for carcinogenicity was inadequate 1) .l |
| IARC | IARC In 1995 IARC concluded, "There is inadequate evidence in humans for the carcinogenicity of carbon black." Based on rat inhalation studies IARC concluded that there is, "sufficient evidence in experimental animals for the carcinogenicity of carbon black," IARC's overall evaluation was that, "Carbon black is possibly carcinogenic to humans (Group 2B)". This conclusion was based on IARC's guidelines, which require such a classification if one species exhibits carcinogenicity in two or more studies. IARC performed another review in 2006, and again classified carbon black as possibly carcinogenic to humans (Group 2B). In its 1987 review IARC concluded, "There is sufficient evidence in experimental animals for the carcinogenicity of carbon black extracts." Carbon black extracts are classified as, possibly carcinogenic to humans (Group 2B). |
| LD50 (Rat) | >8000 mg/kg |
| Mutagenic Effects and Germ Cell Mutagenicity | In an experimental investigation, mutational changes in the hprt gene were reported in alveolar epithelial cells in the rat following inhalation exposure to carbon black. This observation is believed to be rat specific and a consequence of "lung overload" which led to chronic inflammation and release of genotoxic oxygen species. This mechanism is considered to be a secondary genotoxic effect and thus, carbon black itself would not be considered to be mutagenic. Carbon black is not suitable to be tested in bacterial (Ames test) and other in vitro systems because of its insolubility in aqueous solutions. When tested, however, results for carbon black showed no mutagenic effects. Organic solvent extracts of carbon black can, however, contain traces of polycyclic aromatic hydrocarbons (PAHs). A study to examine the bioavailability of these PAHs showed that PAHs are very tightly bound to carbon black and not bioavailable. |

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| NIOSH | NIOSH The U.S. National Institute of Occupational Safety and Health (NIOSH) 1978 criteria document on carbon black recommends that only carbon blacks with PAH contaminant levels greater than 0.1% require the measurement of PAHs in air. As some PAHs are possible human carcinogens, NIOSH recommends an exposure limit of 0.1 mg/m ³ for PAHs in air, measured as the cyclohexane-extractable fraction. |
| NTP | NTP Carbon black is not designated a carcinogen by the U.S. National Toxicology Program (NTP), the U.S. Occupational Safety and Health Administration (OSHA) or the European Union (EU). |
| Reproductive and Teratogenic Effects | No experimental studies on effects of carbon black on fertility and reproduction have been located. However, based on toxicokinetic data, carbon black is deposited in the lungs and based on its specific physicochemical properties (insolubility, low absorption potential), it is not likely to distribute in the body to reach reproductive organs, embryo and/or foetus under in vivo conditions. Therefore, no adverse effects of carbon black to fertility/reproduction or to foetal development are expected. No effects have been reported in long-term animal studies. |
| Sensitization | No animal data is available. No cases in humans have been reported. |
| STOT- repeated exposure | Therefore, no STOT, Repeated exposure classification is made. |
| STOT- single exposure | Inhalation studies with the rat showed lung effects (see Section 11.2 and 11.3), these effects are believed to be the effects of "lung overload" 1 and these effects are believed to be specific to the species. In addition, the European CLP Regulation states that no classification is necessary if the mechanism is not relevant to humans. 4) Also, the CLP Guidance on classification and labeling states that the "lung overload" mechanism is not relevant to humans. 4) Therefore, no STOT, Repeated Exposure classification is made |
| Crystalline Silica(14808-60-7) | |
| Acute toxicity - Dermal | No data available. |
| Acute toxicity - Inhalation | No data available. |
| Additional Information | RTECS: VV7330000 Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and miliary nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis. In advanced stages, loss of appetite, pleuritic pain, and total incapacity to work. Advanced silicosis may result in death due to cardiac failure or destruction of lung tissue. Crystalline silica is classified as group 1 "known to be carcinogenic to humans" by IARC and "sufficient evidence" of carcinogenicity by the NTP., The chronic health risks are associated with respirable particles of 3-4 um over protracted periods of time. Currently, there is a limited understanding of the mechanisms of quartz toxicity, including its mechanisms for lung carcinogenicity. |
| Additional Information (cont.) | Additional studies are needed to determine whether the cell transforming activity of quartz is related to its carcinogenic potential. Liver - Irregularities - Based on Human Evidence Liver - Irregularities - Based on Human Evidence. |
| Aspiration hazard | No data available. |
| Carcinogenicity | Limited evidence of carcinogenicity in human studies IARC: 1 - Group 1: Carcinogenic to humans (Quartz) ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: Known to be human carcinogen (Quartz) OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| Germ Cell mutagenicity | No data available. |
| Reproductive toxicity | No data available. |
| Respiratory or skin sensitization | No data available. |
| Serious eye damage/eye irritation | No data available. |
| Skin corrosion/irritation | No data available. |
| Specific target organ toxicity - repeated exposure | Inhalation - May cause damage to organs through prolonged or repeated exposure. |
| Specific target organ toxicity - single exposure | No data available. |
| Methyl Amyl Ketone(110-43-0) | |
| Aspiration hazard | May be harmful if swallowed and enters airways. |
| Carcinogenicity | No data available. |
| LD50 Dermal - (Rat) | >2,000 mg/kg |
| LD50 Inhalation - (Rat) | >16.7 mg/l (4 h) |
| LD-50 Oral - (Rat) | 1,600 mg/kg |
| Mutagenicity | In vitro, No data available. In vivo, No data available. |
| Other adverse effects | No data available. |
| Repeated dose toxicity | No data available. |
| Reproductive toxicity | No data available. |
| Respiratory or skin | Skin Sensitization: (Mouse) - non-sensitizing. |

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| sensitization | |
| Serious eye damage/eye irritation | (Rabbit, 24 h): slight. |
| Skin corrosion/irritation | (Rabbit, 24 h): moderate. |
| Specific target organ toxicity - repeated exposure | No data available. |
| Specific target organ toxicity - single exposure | No data available. |
| Methyl Ethyl Ketone(78-93-3) | |
| Aspiration toxicity | Product: May be harmful if swallowed and enters airways. |
| Carcinogenicity | Remarks: This information is not available, Carcinogenicity-Assement: Not classified as a human carcinogen. |
| Further information | Product Remarks: Symptoms of overexposure may be headache, diaainess, titedness, nausea and vomiting. |
| Germ cell mutagenicity | Genotoxicity in vitro: Test Type: Ames test, Metabolic activation: with and without metabolic activation, Method OECD Test Guideline 471 |
| LC50 (mouse) inhalation | 320 mg/l (4 h exposure) |
| LC50 (rat) Oral | 3737 mg/kg |
| LD50 (rabbit) dermal | 6,480 mg/kg |
| Reproductive toxicity | Effects on fetal development, Species: rat female, Application Route: Inhalation, Dose: 400, 1000, 3000 ppm, |
| Respiratory or skin sensitisation | Test Type: Buehler Test, Species guinea pig, Method OECD Test Guideline 406, Result: Did not cause sensitization on laboratory animals. |
| Serious eye damage/eye irritation | Remarks: Severe skin irritation, Species rabbit, Exposure time 24 h, Result: Irritation to eyes |
| Skin corrosion/irritation | Remarks: Moderate skin irritation, Species rabbit, Exposure time 24 h, Result: Mild skin irritation |
| STOT - repeated exposure | Product: No data available, Components: No data available. |
| STOT - single exposure | Product: Target Organs: Central Nervous system, Components: Exposure routes: Inhalation, Product: Target Organs: Central Nervous system |
| n-Butyl Acetate(123-86-4) | |
| Aspiration hazard | No data available. |
| Carcinogenicity | No data available. |
| Inhalation | No data available. |
| LD-50 Dermal - (Rabbit) | > 16ml/kg |
| LD-50 Oral - (Rat) | 14,130 mg/kg |
| Mutagenicity | In vitro: No data available. In vivo: No data available. |
| Other adverse effects: | No data available. |
| Repeated dose toxicity | No data available. |
| Reproductive toxicity | No data available. |
| Respiratory or skin sensitization | Skin Sensitization:, (Guinea Pig) - non-sensitizing. |
| Serious eye damage/eye irritation | (Rabbit, 24 h): none |
| Skin corrosion/irritation | (Rabbit, 24 h): none |
| Specific target organ toxicity - repeated exposure | No data available. |
| Specific target organ toxicity - single exposure | Narcotic effect. |
| TALC(14807-96-6) | |
| Acute toxicity - Dermal | No data available. |
| Acute toxicity - Inhalation | No data available. |
| Additional Information | RTECS: WW2710000 Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and miliary nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis. In advanced stages, loss of appetite, pleuritic pain, and total incapacity to work. Advanced silicosis may result in death due to cardiac failure or destruction of lung tissue. Crystalline silica is classified as group 1 "known to be carcinogenic to humans" by IARC and "sufficient evidence" of carcinogenicity by the NTP. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence Liver - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence Liver - Irregularities - Based on Human Evidence (Quartz). |

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| Aspiration hazard | No data available. |
| Carcinogenicity | Carcinogenicity - Rat - Inhalation Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration: Tumors. IARC: 1 - Group 1: Carcinogenic to humans (Quartz) IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrous magnesium silicate) 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrous magnesium silicate) NTP: Known to be human carcinogen (Quartz) OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| Germ cell mutagenicity | No data available. |
| Reproductive toxicity | No data available. |
| Respiratory or skin sensitization | No data available. |
| Serious eye damage/eye irritation | No data available. |
| Skin corrosion/irritation | Skin - Human Result: Mild skin irritation - 3 h |
| Specific target organ toxicity - repeated exposure | No data available. |
| Specific target organ toxicity - single exposure | No data available. |
| Titanium Dioxide(13463-67-7) | |
| Carcinogenicity | In lifetime inhalation studies rats were exposed for 2 years to respectively 10, 50, 250 mg/m3 of respirable TiO2. |
| Dermal ALD (rabbit) | >10000 mg/m3 |
| Eye irritation | slight irritation |
| Inhalation 4 h ALC | >6.82 mg/l |
| ORAL ALD (rat) | >2400 mg/kg |
| Sensitisation | Did not cause sensitisation on laboratory animals. |
| Skin irritation | slight irritation |
| TRIZINC BIS(ORTHOPHOSPHATE) *2-4 H2O(7779-90-0) | |
| Additional Information | RTECS: TD0590000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. |
| Aspiration hazard | No data available. |
| Carcinogenicity | IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| Dermal | No data available. |
| Germ cell mutagenicity | No data available. |
| Inhalation | No data available. |
| LD50 Intraperitoneal - Mouse | 552 mg/kg, Remarks: Lungs, Thorax, or Respiration: Other changes. |
| LD50 Oral - Rat - Acute toxicity | >5,000 mg/kg, (OECD Test Guideline 401) |
| Reproductive toxicity | No data available. |
| Respiratory or skin sensitization | No data available. |
| Serious eye damage/eye irritation | Eyes - Rabbit Result: No eye irritation - 72 h (OECD Test Guideline 405) |
| Skin corrosion/irritation | No data available. |
| Specific target organ toxicity - repeated exposure | No data available. |
| Specific target organ toxicity - single exposure | No data available. |

12. ECOLOGICAL INFORMATION

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| Amorphous Fumed Silica(112945-52-5) | |
| Behavior in environmental compartments | Bioaccumulation Not to be expected. |
| Biodegradability | Inorganic product, Test of the biodegradability cannot be carried out |

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| EC50 Daphnia magna | > 10000 mg/l / 24 h Method: OECD 202. |
| LC50 (Brachydanio rerio) | > 10000 mg/l / 96 h Method: OECD 203. |
| Mobility | No remarkable mobility in soil is to be expected. |
| Amorphous Silica(7631-86-9) | |
| Additional ecological information | General notes: Do not allow product to reach ground water, water course or sewage system. |
| Bioaccumulative potential | No further relevant information available. |
| EC50 - Algae | >10000 mg/l (Scenedesmus subspicatus) (72 h) (OCED 201) comparable substance |
| EC50 - Daphnia magna | >1000 mg/l (Daphnia magna) (24 h) (OCED 202) |
| LCO - Zebra fish | 10000 mg/l (zebra fish) (96 h) (static) (OCED203) |
| Mobility in soil | No further relevant information available. |
| Persistence and degradability | The product is chemically and biologically inert. By the insolubility in water there is a seperstion at evrty filtration and sedimentation process. |
| Carbon Black(1333-86-4) | |
| Behavior in water treatment plants | Activated sludge, EC0 (3 h) > 800 mg/L. DEV L3 (TTC test) |
| Bioaccumulation Potential | Potential bioaccumulation is not expected because of the physicochemical properties of the substance |
| EC50 (Scenedesmus subspicatus) | > 10,000 mg/L, OECD (Guideline 201) |
| EC50 Daphnia magna (waterflea) | >5600 mg/l (24 h) OECD (Guideline 202) |
| Environmental fate | Carbon black is an inert solid, stable and insoluble in water or organic solvents. Its vapour pressure is negligible. Based on these properties it is expected that carbon black will not occur in air or water in relevant amounts. Also potential for distribution via water or air can be dismissed. The deposition in soil or sediments is therefore the most relevant compartment of fate in the environment. |
| LC50 Brachydanio reio (zebrafish) | >1000 mg/l (96 h) OECD (Guideline 203) |
| NOEC 50 (Scenedesmus subspicatus) | > 10,000 mg/L, OECD (Guideline 201) |
| Crystalline Silica(14808-60-7) | |
| Bioaccumulative potential | No data available. |
| Mobility in soil | No data available. |
| Other adverse effects | No data available. |
| Persistence and degradability | No data available. |
| Results of PBT and vPvB assessment | PBT/vPvB assessment not available as chemical safety assessment not required/not conducted |
| Toxicity | No data available. |
| Methyl Amyl Ketone(110-43-0) | |
| Aquatic invertebrates | No data available. |
| Bioaccumulative potential | No data available. |
| Chronic Toxicity (Fish) | No data available. |
| ErC50 (Selenastrum capricornutum) | 98.2 mg/l, 72 h |
| LC50 (Fathead Minnow) Acute toxicity | 131 mg/l , (96 h) |
| Mobility in soil | No data available. |
| Persistence and degradability | 69 % (28 d, Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)). Biological Oxygen Demand BOD-5: 1,770 mg/g BOD-20: 2,000 mg/g , Chemical Oxygen Demand: 2,420 mg/g, BOD/COD ratio No data available. |
| Results of PBT and vPvB assessment | No data available. |
| Methyl Ethyl Ketone(78-93-3) | |
| Bioaccumulative potential | Partition coefficient: n-octanol/water: log Pow: 2.49 |
| EC50 (Algae) | 2029 mg/l (48 h; Pseudokirchneriella subcapitata (Green Algae)) |
| EC50 (Daphnia) | 308 mg/l (48 h; Daphnia magna (Water flea)) |
| LC50 (fish) | 2993 mg/l (96 h; Pimephales promelas (Fathead minnow)) |
| Mobility in soil | No data available |
| Other adverse effects | No data available |
| Persistence and degradability | Biodegradability: Concentration: 2mg/l; Result: Readily biodegradation: 98%; Exposure 28 d; |
| Product | Regulation: 40CFR Protection of Environment, Part 82 Protection of Stratospheric Ozone - CAA |

| Section 602 Class 1 Substances: | |
|---|---|
| n-Butyl Acetate(123-86-4) | |
| Bioaccumulative potential | No data available. |
| Chronic Toxicity | Fish: No data available. Aquatic invertebrates: No data available. Toxicity to Aquatic Plants: No data available. |
| LC-50 (Fathead Minnow) Acute Toxicity | 18 mg/l, (96 h) |
| LC-50 (Water Flea) Aquatic invertebrates | 44 mg/l , (48 h) |
| Mobility in soil | Known or predicted distribution to environmental compartments: No data available. |
| Other adverse effects | No data available. |
| Persistence and degradability | 83 % (28 d), Biological Oxygen Demand:BOD-5: 730 mg/g, Chemical Oxygen Demand:1,010 mg/g, BOD/COD ratio:72 %. |
| Results of PBT and vPvB assessment | No data available. |
| TALC(14807-96-6) | |
| Bioaccumulative potential | No data available. |
| Mobility in soil | No data available. |
| Other adverse effects | No data available. |
| Persistence and degradability | No data available. |
| Results of PBT and vPvB assessment | PBT/vPvB assessment not available as chemical safety assessment not required/not conducted |
| Toxicity | No data available. |
| Titanium Dioxide(13463-67-7) | |
| LC50 fish | Fathead minnow 96 h >1000 mg/l |
| TRIZINC BIS(ORTHOPHOSPHATE) *2-4 H2O(7779-90-0) | |
| Bioaccumulative potential | No data available. |
| LC50 - Oncorhynchus mykiss - Toxicity to fish | 0.09 mg/l - 96 h, Oncorhynchus mykiss (rainbow trout) |
| Mobility in soil | No data available. |
| Other adverse effects | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects. |
| Persistence and degradability | No data available. |
| Results of PBT and vPvB assessment | PBT/vPvB assessment not available as chemical safety assessment not required/not conducted. |

13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

GENERAL INFORMATION : No data available.

DISPOSAL METHOD: Dispose of waste and residues in accordance with Local, State, and Federal Regulations. Mix with compatible chemical which is less flammable and incenerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind or weld or near this container.

14. TRANSPORT INFORMATION

***CHECK WITH YOUR CARRIER FOR ADDITIONAL RESTRCITIONS THAT MAY APPLY.**

**USDOT GROUND
DOT (DEPARTMENT OF TRANSPORTATION)
PROPER SHIPPING NAME (DOT) :** Paint
HAZARDS CLASS : 3
UN/NA NUMBER : UN1263
PACKING GROUP : PG II
EMERGENCY RESPONSE GUIDE (ERG) : 128

**IATA (AIR)
DOT (INTERNATIONAL AIR TRANSPORTATION ASSOCIATION)
PROPER SHIPPING NAME :** Paint
HAZARDS CLASS : 3
UN/NA NUMBER : UN1263

PACKING GROUP : PG II
EMERGENCY RESPONSE GUIDE (ERG) : 128

IMDG (OCEAN)

PROPER SHIPPING NAME : Paint
HAZARDS CLASS : 3
UN/NA NUMBER : UN1263
PACKING GROUP : PG II
EMERGENCY RESPONSE GUIDE (ERG) : 128

MARINE POLLUTANT : No

SPECIAL PRECAUTIONS : P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P235 Keep cool.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

All ingredients in Section #3 are TSCA (Toxic Substance Control Act) listed.

OSHA HAZARDS : Flammable liquid, Moderate skin irritant, Moderate eye irritant, Carcinogen.

EPCRA - Emergency

CERCLA REPORTABLE QUANTITY

| This product contains: | Chemical CAS# |
|-------------------------------|----------------------|
| Methyl Ethyl Ketone | 78-93-3 |
| Carbon Black | 1333-86-4 |
| n-Butyl Acetate | 123-86-4 |

SARA 304 Extremely Hazardous Substances Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

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

SARA 313 :

Not reportable.

CLEAN AIR ACT :

INTERNATIONAL REGULATIONS

CLASSIFICATION ACCORDING TO REGULATION (EC) No. 1272/2008 (CLP) :

Flam. Liq. Cat. 2; H226
Eye Irrit. Cat. 2; H319
STOT SE 3 H336

NATIONAL REGULATIONS

| This product contains: | Chemical CAS# |
|-------------------------------|----------------------|
| #Titanium Dioxide | 13463-67-7 |

Indicates a chemical listed by IARC as a possible carcinogen.

STATE REGULATIONS

CALIFORNIA PROPOSITION 65

| This product contains: | Chemical CAS# |
|-------------------------------|----------------------|
| *Talc | 14807-96-6 |
| *Crystalline Silica | 14808-60-7 |

*This product contains (a) chemical (s) known to the State of California to cause cancer.

#This product contains (a) chemical (s) known to the State of California to be carcinogenic.

+This product contains (a) chemical (s) known to the State of California to cause birth defects or other reproductive harm.

Massachusetts Right to Know

| This product contains | Chemical CAS# |
|-----------------------|---------------|
| Methyl Ethyl Ketone | 78-93-3 |
| Talc | 14807-96-6 |
| Carbon Black | 1333-86-4 |
| n-Butyl Acetate | 123-86-4 |

Pennsylvania Right to Know

| This product contains | Chemical CAS# |
|------------------------|---------------|
| Titanium Dioxide | 13463-67-7 |
| Methyl Amyl Ketone | 110-43-0 |
| Methyl Ethyl Ketone | 78-93-3 |
| Amorphous Silica | 7631-86-9 |
| Aluminum Hydroxide | 21645-51-2 |
| Amorphous Fumed Silica | 112945-52-5 |
| Talc | 14807-96-6 |
| Carbon Black | 1333-86-4 |
| n-Butyl Acetate | 123-86-4 |

New Jersey Right to Know

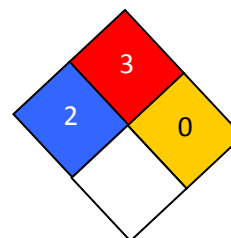
| This product contains | Chemical CAS# |
|------------------------|---------------|
| Titanium Dioxide | 13463-67-7 |
| Methyl Amyl Ketone | 110-43-0 |
| Methyl Ethyl Ketone | 78-93-3 |
| Amorphous Silica | 7631-86-9 |
| Aluminum Hydroxide | 21645-51-2 |
| Amorphous Fumed Silica | 112945-52-5 |
| Talc | 14807-96-6 |
| Carbon Black | 1333-86-4 |
| n-Butyl Acetate | 123-86-4 |

16. OTHER INFORMATION

HMIS RATING

| | |
|-----------------------|----|
| Health : | 2* |
| Flammability : | 3 |
| Reactivity : | 0 |
| Personal Protection : | H |

NFPA CODES



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