

MATERIAL SAFETY DATA SHEET

COPPER

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| NON-EMERGENCY TELEPHONE | : | Product Stewardship (770) 271-5902 |
|-------------------------------|---|--|
| Emergency telephone number | : | CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
| Product name | : | COPPER |
| Product code | : | CC10003364 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

| Components | CAS-No. | Weight % |
|------------|------------|----------|
| Mica | 12001-26-2 | 1 - 5 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure.

POTENTIAL HEALTH EFFECTS

| Routes of Exposure: | : Inhalation, Ingestion, Skin contact |
|---|---|
| Acute exposure | |
| Inhalation Ingestion Eyes | Resin particles, like other inert materials, can be mechanically irritating. May be harmful if swallowed. Resin particles, like other inert materials, are mechanically irritating to eyes. |
| Skin | : Experience shows no unusual dermatitis hazard from routine handling. |
| Chronic exposure | : Refer to Section 11 for Toxicological Information. |
| Medical Conditions Aggravated by Exposure: | : None known. |



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| | 4. FIRST AID MEASURES |
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| Inhalation | : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice. |
| Ingestion | : Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice. |
| Eyes | : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention. |
| Skin | : Wash off with soap and plenty of water. If skin irritation persists seel medical attention. |
| | 5. FIRE-FIGHTING MEASURES |
| Flash point | : Not applicable |
| - | |
| Flammable Limits | |
| Upper explosion limit | : Not applicable |
| Lower explosion limit | : Not applicable |
| Autoignition temperature | : Not relevant |
| Suitable extinguishing media | : Carbon dioxide blanket, Water spray, dry powder, foam. |
| Special Fire Fighting | : Fullface self-contained breathing apparatus (SCBA) used in positive |
| Procedures | |
| Flocedules | pressure mode should be worn to prevent inhalation of airborne contaminants. |
| Unusual Fire/Explosion Hazards | : None |
| | 6. ACCIDENTAL RELEASE MEASURES |
| Personal precautions | : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls. |
| Environmental precautions | : Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil. |
| Methods for cleaning up | : Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal. Refer to Section 12 of this MSDS for proper disposal methods. |
| | 7. HANDLING AND STORAGE |
| Handling | : Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation. |
| Storage | : Keep containers dry and tightly closed to avoid moisture absorption |



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| | а | nd contamination. K | eep in a d | ry, cool place. | | |
| 8. 1 | EXPOSURE | CONTROLS / PER | SONAL | PROTECTION | | |
| Respiratory protection | : 1 | No personal respirator | y protecti | ve equipment nor | mally re | quired. |
| Eye/Face Protection | : \$ | Safety glasses with side-shields. | | | | |
| Hand protection | : F | : Protective gloves. | | | | |
| Skin and body protection | : I | : Long sleeved clothing. | | | | |
| Additional Protective Measures | : 5 | : Safety shoes. | | | | |
| General Hygiene Considerations | : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. | | | | | |
| Engineering measures | | : Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery. | | | | |
| Components Mica | Value 3 mg/m3 | Exposure tim Time Weighted A | | Exposure typ Total dust. | | List: ACGIH |
| Mica | 20 mppcf | (TWA): PEL: | | Total dust. | | OSHA |
| | | CAL AND CHEMIC | AT PRO | | | |
| | <i>7</i> ,111,51 | | | | | |
| | | | | | | |
| Form | : Soli | | | ration rate : | | pplicable. |
| Appearance | : Pelle | ets | Specif | ic Gravity : | Not d | etermined |
| Appearance Color | : Pello : BRO | ets DWN | Specif Bulk d | ic Gravity : ensity : | Not d Not e | etermined stablished |
| Appearance Color Odor | : Pello : BRO : Very | ets DWN y faint | Specif Bulk d Vapor | ic Gravity : ensity : pressure : | Not d Not e Not a | etermined stablished pplicable |
| Appearance Color Odor Melting point/range | : Pelle : BRC : Very : Not | ets DWN y faint determined | Specif Bulk d Vapor Vapor | ic Gravity : ensity : | Not d Not e Not a Not a | etermined stablished pplicable pplicable |
| Appearance Color Odor Melting point/range Boiling Point: | : Pelle : BRC : Very : Not | ets DWN y faint determined applicable | Specif Bulk d Vapor | ic Gravity : ensity : pressure : | Not d Not e Not a Not a | etermined stablished pplicable |
| Appearance Color Odor | : Pelle : BRO : Very : Not : Not : Inso | ets DWN y faint determined applicable | Specif Bulk d Vapor Vapor pH | ic Gravity ensity pressure density | Not d Not e Not a Not a | etermined stablished pplicable pplicable |
| Appearance Color Odor Melting point/range Boiling Point: | : Pelle : BRO : Very : Not : Not : Inso 10. | ets DWN y faint determined applicable luble | Specif Bulk d Vapor Vapor pH | ic Gravity ensity pressure density | Not d Not e Not a Not a | etermined stablished pplicable pplicable |
| Appearance Color Odor Melting point/range Boiling Point: Water solubility | : Pelle : BRC : Ver : Not : Not : Inso 10. | ets DWN y faint determined applicable luble STABILITY AND R | Specif Bulk d Vapor Vapor pH | ic Gravity ensity pressure density | Not d Not e Not a Not a | etermined stablished pplicable pplicable |
| Appearance Color Odor Melting point/range Boiling Point: Water solubility Stability | : Pella : BRC : Very : Not : Not : Inso 10.3 : S n : V | ets DWN y faint determined applicable luble STABILITY AND R Stable. | Specif Bulk d Vapor PH EACTIV | ic Gravity : ensity : pressure : density : TTY TTY | Not d Not e Not a Not a | etermined stablished pplicable pplicable pplicable |



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Hazardous decomposition products

: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.

11. TOXICOLOGICAL INFORMATION

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

| | Mica | Systemic effects | Respiratory system. | | | | |
|----------------------------------|--|--|---------------------|--|--|--|--|
| | 12. ECOLOGI | ICAL INFORMATION | 1 | | | | |
| Persistence and degrada | ability : Not readily | biodegradable. | | | | | |
| Environmental Toxicity | | : Chemicals are not readily available as they are bound within the matrix of the polymer. | | | | | |
| Bioaccumulation Poten | | : Chemicals are not readily available as they are bound within the matrix of the polymer. | | | | | |
| Additional advice | : No data ava | ilable. | | | | | |
| | 13. DISPOSAL | L CONSIDERATIONS | 9 | | | | |
| Product Contaminated packagin | g : Recycling is has the respondent | Like most thermoplastics the product can be recycled. Where possible, recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. | | | | | |
| | 14. TRANSPO | ORT INFORMATION | | | | | |
| U.S. DOT Classification | n : Refer to spe | cific regulation. | | | | | |
| ICAO/IATA | : Refer to spe | cific regulation. | | | | | |
| IMO / IMDG | : Refer to spe | cific regulation. | | | | | |
| | 15. REGULAT | ORY INFORMATION | N | | | | |
| | | | | | | | |

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| US Regulations: | | |
| OSHA Status | : | Classified as hazardous based on components. |
| TSCA Status | : | All components of this product are listed on or exempt from the TSCA Inventory. |
| US. EPA CERCLA Hazardous | Sub | stances (40 CFR 302) |
| Not applicable | | |
| California Proposition 65 | : | This product does not contain a substance listed by California Prop 65. |
| SARA Title III Section 302 Ext | rem | ely Hazardous Substance |
| Not applicable | | |
| SARA Title III Section 313 Tox | ic C | Chemicals: |
| Not applicable | | |
| Canadian Regulations: | | |
| WHMIS Classification | : | Not controlled. |
| DSL | : | All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. |
| National Inventories: | | |
| Australia AICS | : | Not determined. |
| China IECS | : | Not determined. |
| Europe EINECS | : | Not determined. |
| Japan ENCS | : | Not determined. |
| Korea KECI | : | Not determined. |
| Philippines PICCS | : | Not determined. |
| | | 16. OTHER INFORMATION |

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.