

MATERIAL SAFETY DATA SHEET

SILVER

Version Number 1.1 Revision Date 02/02/2004 Page 1 of 6 Print Date 11/13/2011

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 | : | SILVER |
| Product code | : | CC10000273 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|------------------|------------|----------|
| Aluminum | 7429-90-5 | 1 - 5 |
| Mica | 12001-26-2 | 10 - 30 |
| Titanium dioxide | 13463-67-7 | 10 - 30 |

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 | Resin particles, like other inert materials, can be mechanically irritating.May be harmful if swallowed. |
| Eyes | : 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. |



MATERIAL SAFETY DATA SHEET SILVER

Version Number 1.1 Revision Date 02/02/2004 Page 2 of 6 Print Date 11/13/2011

| Aggravated by Exposure: | |
|--|---|
| | 4. FIRST AID MEASURES |
| 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 Lower explosion limit Autoignition temperature | Not applicable Not applicable Not applicable |
| Suitable extinguishing media | : Carbon dioxide blanket, water spray, dry powder, foamnone. |
| Special Fire Fighting Procedures | : Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. |
| Unusual Fire/Explosion Hazards | Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. |
| | 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. |



MATERIAL SAFETY DATA SHEET SILVER

Version Number 1.1 Revision Date 02/02/2004

Storage

Page 3 of 6 Print Date 11/13/2011

: Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| Respiratory protection | : | No personal respiratory protective equipment normally required. |
|-----------------------------------|---|---|
| Eye/Face Protection | : | Safety glasses with side-shields. |
| Hand protection | : | Protective gloves. |
| Skin and body protection | : | Long sleeved clothing. |
| Additional Protective Measures | : | 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. |

Exposure limit(s)

| Components | Value | Exposure time | Exposure type | List: |
|------------------|----------|-----------------------|------------------------|---------|
| Aluminum | 10 mg/m3 | Time Weighted Average | Dust. | ACGIH |
| | | (TWA): | | |
| | 5 mg/m3 | Time Weighted Average | Welding fume. as Al | ACGIH |
| | | (TWA): | | |
| | 15 mg/m3 | PEL: | Total dust. as Al | OSHA Z1 |
| | 5 mg/m3 | PEL: | Respirable dust. as Al | OSHA Z1 |
| Mica | 20 mppcf | PEL: | Total dust. | OSHA |
| | 3 mg/m3 | Time Weighted Average | Respirable fraction. | ACGIH |
| | | (TWA): | | |
| Titanium dioxide | 10 mg/m3 | Time Weighted Average | | ACGIH |
| | | (TWA): | | |
| | 15 mg/m3 | PEL: | Total dust. | OSHA Z1 |

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form Appearance Color Odor Melting point/range Boiling Point: Water solubility
- Solid
 Pellets
 GREY
 Very faint
 Not determined
 Not applicable
 Insoluble
- Evaporation rate Specific Gravity: Bulk density Vapor pressure Vapour density pH
- Not applicable
 Not determined
 Not established
 Not applicable
 Not applicable
 Not applicable



MATERIAL SAFETY DATA SHEET SILVER

Version Number 1.1 Revision Date 02/02/2004

Page 4 of 6 Print Date *11/13/2011*

| 10. STABILITY AND REACTIVITY | | | |
|----------------------------------|--|-----|--|
| Stability | : Stable. | | |
| Hazardous Polymerization | : Will not occur. | | |
| Conditions to avoid | : Keep away from oxidizing agents and open flame. To avoid therr decomposition, do not overheat. | nal | |
| Incompatible Materials | : Incompatible with strong acids and oxidizing agents. | | |
| Hazardous decomposition products | : Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. | 1 | |

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:

| CAS-No. | Chemical Name | Effect | Target Organ |
|------------|------------------|------------------|---------------------------------|
| 7429-90-5 | Aluminum | Irritant | Skin, Respiratory system. |
| | | Systemic effects | Eyes, Skin, Respiratory system. |
| 12001-26-2 | Mica | Systemic effects | Respiratory system. |
| 13463-67-7 | Titanium dioxide | Systemic effects | Respiratory system. |

12. ECOLOGICAL INFORMATION

| Persistence and degradability | : | Not readily biodegradable. |
|-------------------------------|-----------------|---|
| Environmental Toxicity | : | Chemicals are not readily available as they are bound within the matrix of the polymer. |
| Bioaccumulation Potential | : | Chemicals are not readily available as they are bound within the matrix of the polymer. |
| Additional advice | : | No data available |
| | | |
| | 13 | 3. DISPOSAL CONSIDERATIONS |
| Product | <u>1</u> : : | 3. DISPOSAL CONSIDERATIONS Like most thermoplastic plastics 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. |



MATERIAL SAFETY DATA SHEET **SILVER**

Version Number 1.1 Revision Date 02/02/2004

Page 5 of 6 Print Date 11/13/2011

has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.

14. TRANSPORT INFORMATION

| U.S. DOT Classification | : Not regulated for transportation |
|-------------------------|------------------------------------|
| ICAO/IATA (air) | : Refer to specific regulation. |
| IMO / IMDG (maritime) | : Refer to specific regulation. |

15. REGULATORY INFORMATION

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 Substances (40 CFR 302)

Not applicable

California Proposition : This product does not contain a substance listed by California Prop 65. 65

SARA Title III Section 302 Extremely Hazardous Substance

Not applicable

SARA Title III Section 313 Toxic Chemicals:

| Chemical Name | CAS-No. | Weight % |
|-------------------------|-----------|----------|
| ALUMINUM (FUME OR DUST) | 7429-90-5 | 1.08 |

Canadian Regulations:

| National Pollutant Release Inventory (NPRI) | ational Pollutant Release Inventory (NPRI) | | | | |
|---|--|----------|----------|--|--|
| Chemical Name | CAS-No. | Weight % | NPRI ID# | | |
| Aluminum | 7429-90-5 | 1.08 | 12 | | |



MATERIAL SAFETY DATA SHEET **SILVER**

Version Number 1.1 Revision Date 02/02/2004

Page 6 of 6 Print Date 11/13/2011

| WHMIS Classification | : | D2B | | | |
|------------------------------------|---|--|--|--|--|
| WHMIS Ingredient Disclosure List | | | | | |
| CAS-No. 7429-90-5 12001-26-2 | | | | | |
| DSL | : | All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. | | | |
| National Inventories: | | | | | |
| Australia AICS | : | Listed | | | |
| China IECS | : | Listed | | | |
| Europe EINECS | : | Listed | | | |
| Japan ENCS | : | Not determined | | | |
| Korea KECI | : | Listed | | | |
| Philippines PICCS | : | Listed | | | |
| | | 16. OTHER INFORMATION | | | |

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 when used in combination with any other materials and/or in any particular process or processing conditions.