MATERIAL SAFETY DATA SHEET **D4003 WHITE**

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 8155 Cobb Center Drive, Kennesaw, GA 30152

| Telephone Emergency telephone | : | Product Stewardship (770) 590-3500 x.3563 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|--------------------------------------|---|--|
| Product name | : | D4003 WHITE |
| Product code | : | FO20022434 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components | CAS-No. | Weight percent |
|------------------|------------|----------------|
| Titanium dioxide | 13463-67-7 | 1 - 5 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole for health effects. Information provided on health effects of this product is based on the individual components. However, some vapors or contaminants 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. See sections 8 and 11 for special precautions.

POTENTIAL HEALTH EFFECTS

| Routes of Exposure: | : Inhalation, Skin contact, Ingestion |
|---|--|
| Acute exposure | |
| Inhalation | : Inhalation of airborne droplets may cause irritation of the respiratory tract. |
| Ingestion | : May be harmful if swallowed. |
| Eyes | : May cause eye and skin irritation. |
| 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 |
|--|---|
| 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 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 seek medical attention. |
| | 5. FIRE-FIGHTING MEASURES |
| Flash point | : no data available |
| Flammable Limits Upper explosion limit Lower explosion limit Autoignition temperature Suitable extinguishing media Special Fire Fighting Procedures Unusual Fire/Explosion Hazards | no data available no data available Not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. ACCIDENTAL RELEASE MEASURES |
| Personal precautions | Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls. |
| Environmental precautions | : The product should not be allowed to enter drains, water courses or the soil. Should not be released into the environment. |
| Methods for cleaning up | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Package all material in appropriate container for disposal. Refer to Section 13 of this MSDS for proper disposal methods. |
| | 7. HANDLING AND STORAGE |
| Handling | : Heat only in areas with appropriate exhaust ventilation. Processing |



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| | fume condensates may contain combustible or toxic residue. Periodically clean hoods, ducts, and other surfaces to minimize accumulation of these materials. |
| Storage : | Keep containers dry and tightly closed to avoid moisture absorption and contamination. Store in a cool dry place. |
| 8. EXPOSU | RE 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: |
|------------------|----------|-----------------------------------|---------------|----------|
| Titanium dioxide | 10 mg/m3 | Time Weighted Average (TWA): | | ACGIH |
| | 15 mg/m3 | PEL: | Total dust. | OSHA Z1 |
| | 10 mg/m3 | Time Weighted Average (TWA): | Total dust. | OSHA Z1A |
| | 10 mg/m3 | Time Weighted Average (TWA): | as Ti | MX OEL |
| | 20 mg/m3 | Short Term Exposure Limit (STEL): | as Ti | MX OEL |

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form Appearance Colour Odour Melting point/range Boiling Point: Water solubility
- : liquid
 : viscous, liquid
 : YELLOW
 : very faint
 : not applicable
 : not applicable
 : immiscible

Evaporation rate Specific Gravity Bulk density Vapour pressure Vapour density pH Not established
Not determined
Not applicable
Not determined
Not determined
Not applicable

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| 10. STABILITY AND REACTIVITY | | | |
|----------------------------------|---|--|--|
| Stability | : Stable | | |
| Hazardous Polymerization | : Will not occur. | | |
| Conditions to avoid | : Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat. | | |
| Incompatible Materials | : Incompatible with strong acids and oxidizing agents., Avoid contact with acetal homopolymers and acetal copolymers during processing. | | |
| Hazardous decomposition products | Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), hydrogen chloride (HCl), other hazardous materials, and smoke are all possible. Prolonged heating may result in product degradation. As a general rule of thumb, degradation begins to occur after one hour at 177 °C (350 °F), after 10 minutes at 204 °C (400 °F), and within 5 minutes at 232 °C (450 °F). | | |

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 |
|------------|------------------|------------------|---------------------|
| 13463-67-7 | Titanium dioxide | Systemic effects | Respiratory system. |

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

| CAS-No. | Chemical Name | OSHA | IARC | NTP |
|------------|------------------|------|------|-----|
| 13463-67-7 | Titanium dioxide | no | 2B | no |

IARC Carcinogen Classifications:

1 - The component is carcinogenic to humans.

2A - The component is probably carcinogenic to humans.

2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

1 - The component is known to be a human carcinogen.

2 - The component is reasonably anticipated to be a human carcinogen.

12. ECOLOGICAL INFORMATION

Persistence and degradability

: Not readily biodegradable.

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| | |
| Environmental Toxicity | : Environmental toxicity has not been established for this mixture as whole. |
| Bioaccumulation Potential | : no data available |
| Additional advice | : no data available |
| | 13. DISPOSAL CONSIDERATIONS |
| Product | : Where possible recycling is preferred to disposal or incineration. T generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. |
| Contaminated packaging | : 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. TRANSPORT INFORMATION |
| U.S. DOT Classification | : Refer to specific regulation. |
| ICAO/IATA | : 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 Hazardou | us Substances (40 CFR 302) |
| not applicable | |
| California Propositior 65 | n : Not applicable |
| SARA Title III Section 302 E | Extremely Hazardous Substance |
| | |

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|----------------------------------|-------|--------------------|-------------------|------------------------------|---------------------|
| Unless specific chemicals are id | enti | fied under this se | ction, this produ | ict is Not Applicabl | e under this regula |
| SARA Title III Section 313 Tox | tic (| Chemicals: | | | |
| Unless specific chemicals are id | enti | fied under this se | ction, this produ | ict is Not Applicabl | e under this regula |
| Canadian Regulations: | | | | | |
| National Pollutant Relea | se I | nventory (NPRI) | | | |
| Chemical Name | | | CAS-No. | Weight percent | NPRI ID# |
| Miscellaneous Zinc Compour | nds | | 0-31-7 | 0.10 - 1.00 | 241 |
| DSL | : | Substances List | | are on the Canadia cempt. | n Domestic |
| 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 I | | | |

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.