

MATERIAL SAFETY DATA SHEET YELLOW HMF

Version Number 1.0 Revision Date 06/30/2003

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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 | : | YELLOW HMF |
| Product code | : | CC10039225 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

| Components | CAS-No. | Weight % |
|------------------|------------|----------|
| Titanium dioxide | 13463-67-7 | 5 - 10 |

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. |



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| 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 Suitable extinguishing media | Not applicable Not applicable Not relevant Carbon dioxide blanket, water spray, dry powder, foam. | | |
| Special Fire Fighting Procedures Unusual Fire/Explosion Hazards | Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. 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 13 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. | | |



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Storage

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: 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: |
|------------------|----------|-----------------------|---------------|---------|
| Titanium dioxide | 10 mg/m3 | Time Weighted Average | | ACGIH |
| | | (TWA): | | |
| Titanium dioxide | 15 mg/m3 | PEL: | Total dust. | OSHA Z1 |

| Form | : Solid | Evaporation rate | : Not applicable. | |
|--------------------------|---|--|------------------------|--|
| Appearance | : Pellets Specific Gravity : Not dete | | : Not determined | |
| Color | : YELLOW | : YELLOW Bulk density : Not establ | | |
| Odor | : Very faint | : Very faint Vapor pressure : Not applicat | | |
| Melting point/range | : Not determined Vapor density : Not applicable | | | |
| Boiling Point: | : Not applicable pH : Not applica | | | |
| Water solubility | : Insoluble | | | |
| | | | | |
| | 10. STABILITY AN | D REACTIVITY | | |
| Stability | : Stable. | | | |
| Hazardous Polymerization | : Will not occur. | | | |
| | · Keen away from c | xidizing agents and open f | lame. To avoid thermal | |



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|--|---------------|---|---|--|
| Incompatible Material | | Incompatible w | ith strong acids and o | |
| - | | - | - | |
| Hazardous decomposit products | ion : | | | kide (CO), oxides of nitrogen I smoke are all possible. |
| | 11. 7 | FOXICOLOGIC | CAL INFORMATIO | N |
| This mixture has not b health data for the indi | | | | re effects listed are based on existing |
| <u>Toxicity Overview</u> This product contains | the following | components whi | ch in their pure form l | nave the following characteristics: |
| CAS-No. | | nical Name | Effect | Target Organ |
| 13463-67-7 | Titanium d | ioxide | Systemic effects | Respiratory system. |
| | 12 | 2. ECOLOGICA | L INFORMATION | |
| Persistence and degrad | lability : | Not readily biod | legradable. | |
| Environmental Toxicity : Chemicals are not readily available as they are bound within th of the polymer. | | they are bound within the matrix | | |
| Bioaccumulation Poter | ntial : | Chemicals are n of the polymer. | ot readily available as | they are bound within the matrix |
| Additional advice | : | No data availab | le. | |
| | 1. | 3. DISPOSAL C | ONSIDERATIONS | |
| Product | : | possible, recycli generator of war classification, tr | ing is preferred to disp ste material has the re | t can be recycled. Where bosal or incineration. The sponsibility for proper waste osal in accordance with d local regulations. |
| Contaminated packagi | ng : | has the responsi | bility for proper waste accordance with appli | The generator of waste material e classification, transportation cable federal, state/provincial |
| | 1 | 4. TRANSPORT | FINFORMATION | |
| U.S. DOT Classification | on : | Refer to specific | c regulation. | |
| ICAO/IATA | : | Refer to specific | c regulation. | |
| IMO / IMDG | : | Refer to specific | - | |
| | | | | |



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| 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 65 | : This product does not contain a substance listed by California Prop 65 | |
| SARA Title III Section 302 Ext | remely Hazardous Substance | |
| Not applicable | | |
| SARA Title III Section 313 Tox | ic Chemicals: | |
| Not applicable Canadian Regulations: | | |
| WHMIS Classification | : D2B | |
| DSL | : DSL status has not been determined. Quantity use in Canada may be restricted by regulations. | |
| National Inventories: | | |
| Australia AICS | : Listed. | |
| China IECS | : Not determined. | |
| Europe EINECS | : Not determined. | |
| Japan ENCS | : Not determined. | |
| Japan ENCS | : Not determined. | |
| Korea KECI | | |
| - | : Not determined. | |



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