

MATERIAL SAFETY DATA SHEET

UV ORANGE 1655C

Version Number 1.0 Revision Date 04/12/2004

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone Emergency telephone number | : | Product Stewardship (770) 271-5902 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|--|---|---|
| Product name | : | UV ORANGE 1655C |
| Product code | : | CC10052147 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components | CAS-No. | Weight % |
|---|-------------|----------|
| Formamide, | 124172-53-8 | 10 - 30 |
| N,N'-1,6-hexanediylbis[N-(2,2,6,6-tetrameth | | |
| yl-4-piperidinyl)- | | |
| Silica, amorphous | 7631-86-9 | 1 - 5 |
| Calcium carbonate | 1317-65-3 | 5 - 10 |
| 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 eves. |
| Skin | : Experience shows no unusual dermatitis hazard from routine handling. |



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| Medical Conditions | : | None known. |
|--|-------------|---|
| 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 seek 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 applicable 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. A | CCIDENTAL 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 |



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|--|--|--|--|---|--|--|--|
| Handling | : T | ake measures to prevent the b | uild up of electrostatic ch | narge. Heat | | | |
| | 0 | nly in areas with appropriate e | exhaust ventilation. | | | | |
| Storage | | eep containers dry and tightly nd contamination. Keep in a | | e absorption | | | |
| 8. E | XPOSURE | CONTROLS / PERSONAL | PROTECTION | | | | |
| Respiratory protection | : N | o personal respiratory protect | ive equipment normally | required. | | | |
| Eye/Face Protection | : S | afety glasses with side-shields | 3. | | | | |
| Hand protection | : P | rotective gloves. | | | | | |
| Skin and body protection | : L | ong sleeved clothing. | | | | | |
| Additional Protective Measures | : S | afety shoes. | | | | | |
| General Hygiene Considerations | | andle in accordance with good ash hands before breaks and | | afety practio | | | |
| Engineering measures : Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery. | | | | | | | |
| | | | | | | | |
| Exposure limit(s) | | | | | | | |
| Exposure limit(s) Components | Value | Exposure time | Exposure type | List: | | | |
| | Value 5 mg/m3 | Exposure time PEL: | Exposure type Respirable fraction. | | | | |
| Components | | * | | OSHA Z | | | |
| Components | 5 mg/m3 15 mg/m3 | PEL: | Respirable fraction. | OSHA Z | | | |
| Components Calcium carbonate | 5 mg/m3 | PEL: PEL: | Respirable fraction. Total dust. | OSHA Z OSHA Z | | | |
| Components Calcium carbonate | 5 mg/m3 15 mg/m3 20 mppcf | PEL: PEL: PEL: PEL: Time Weighted Average | Respirable fraction. Total dust. Total dust. | OSHA Z OSHA Z OSHA Z3 | | | |
| Components Calcium carbonate Silica, amorphous | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf | PEL: PEL: PEL: PEL: | Respirable fraction. Total dust. Total dust. | OSHA Z OSHA Z OSHA Z3 ACGIH | | | |
| Components Calcium carbonate Silica, amorphous | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf 10 mg/m3 15 mg/m3 | PEL: PEL: PEL: PEL: Time Weighted Average (TWA): | Respirable fraction. Total dust. Total dust. Total dust. Total dust. | OSHA Z OSHA Z OSHA Z3 ACGIH | | | |
| Components Calcium carbonate Silica, amorphous | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf 10 mg/m3 15 mg/m3 9. PHYSIC : Solic | PEL: PEL: PEL: Time Weighted Average (TWA): PEL: CAL AND CHEMICAL PRO | Respirable fraction. Total dust. Total dust. Total dust. Total dust. DPERTIES oration rate : Not | OSHA Z OSHA Z OSHA Z3 ACGIH OSHA Z | | | |
| Components Calcium carbonate Silica, amorphous Titanium dioxide | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf 10 mg/m3 15 mg/m3 9. PHYSIC : Solic : Pelle | PEL: PEL: PEL: Time Weighted Average (TWA): PEL: CAL AND CHEMICAL PRO ts Specific | Respirable fraction. Total dust. Total dust. Total dust. Total dust. OPERTIES pration rate : Not Fic Gravity: : Not | OSHA Z OSHA Z OSHA Z3 ACGIH OSHA Z | | | |
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| Components Calcium carbonate Silica, amorphous Titanium dioxide Form Appearance Color Odor Melting point/range | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf 10 mg/m3 15 mg/m3 9. PHYSIC : Solic : Pelle : ORA : Very : Not of | PEL: PEL: PEL: PEL: Time Weighted Average (TWA): PEL: CAL AND CHEMICAL PRO ts Specific NGE Bulk of faint Vapor determined Vapor | Respirable fraction. Total dust. Total dust. Total dust. Total dust. Total dust. Total dust. OPERTIES oration rate : Not fic Gravity: : Not orationsity : Not orationsity : Not orationsity : Not in density : Not | OSHA Z OSHA Z OSHA Z3 ACGIH OSHA Z applicable determined established applicable applicable | | | |
| Components Calcium carbonate Silica, amorphous Titanium dioxide Form Appearance Color Odor Melting point/range Boiling Point: | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf 10 mg/m3 15 mg/m3 9. PHYSIC : Solic : Pelle : ORA : Very : Not c : Not a | PEL: PEL: PEL: PEL: Time Weighted Average (TWA): PEL: CAL AND CHEMICAL PRO ts Specific NGE Bulk of faint Vapor determined Vapor applicable pH | Respirable fraction. Total dust. Total dust. Total dust. Total dust. Total dust. Total dust. OPERTIES oration rate : Not fic Gravity: : Not orationsity : Not orationsity : Not in density : Not in density : Not | OSHA Z OSHA Z OSHA Z3 ACGIH OSHA Z applicable determined established applicable | | | |
| Components Calcium carbonate Silica, amorphous Titanium dioxide Form Appearance Color Odor Melting point/range | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf 10 mg/m3 15 mg/m3 9. PHYSIC : Solic : Pelle : ORA : Very : Not of | PEL: PEL: PEL: PEL: Time Weighted Average (TWA): PEL: CAL AND CHEMICAL PRO ts Specific NGE Bulk of faint Vapor determined Vapor applicable pH | Respirable fraction. Total dust. Total dust. Total dust. Total dust. Total dust. Total dust. OPERTIES oration rate : Not fic Gravity: : Not orationsity : Not orationsity : Not in density : Not in density : Not | OSHA Z OSHA Z OSHA Z3 ACGIH OSHA Z applicable determined established applicable applicable | | | |
| Components Calcium carbonate Silica, amorphous Titanium dioxide Form Appearance Color Odor Melting point/range Boiling Point: | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf 10 mg/m3 15 mg/m3 9. PHYSIC : Solid : Pelle : ORA : Very : Not a : Insol | PEL: PEL: PEL: PEL: Time Weighted Average (TWA): PEL: CAL AND CHEMICAL PRO ts Specific NGE Bulk of faint Vapor determined Vapor applicable pH | Respirable fraction. Total dust. Total dust. Total dust. Total dust. Total dust. Total dust. OPERTIES oration rate : Not fic Gravity: : Not operation rate : Not in density : Not : Not | OSHA Z OSHA Z OSHA Z Z ACGIH OSHA Z applicable determined established applicable applicable | | | |
| Components Calcium carbonate Silica, amorphous Titanium dioxide Form Appearance Color Odor Melting point/range Boiling Point: | 5 mg/m3 15 mg/m3 20 mppcf 20 mppcf 10 mg/m3 15 mg/m3 9. PHYSIC : Solic : Pelle : ORA : Very : Not a : Insol 10. § | PEL: PEL: PEL: Time Weighted Average (TWA): PEL: CAL AND CHEMICAL PRO ts Specific NGE Bulk of faint Vapor determined Vapor applicable pH uble | Respirable fraction. Total dust. Total dust. Total dust. Total dust. Total dust. Total dust. OPERTIES oration rate : Not fic Gravity: : Not operation rate : Not in density : Not : Not | OSHA Z OSHA Z OSHA Z Z ACGIH OSHA Z applicable determined established applicable applicable | | | |





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| 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. |
| 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:

| CAS-No. | Chemical Name | Effect | Target Organ |
|-------------|-----------------------------|------------------|---------------------------------|
| 124172-53-8 | Formamide, | Irritant | Eyes. |
| | N,N'-1,6-hexanediylbis[N- | | |
| | (2,2,6,6-tetramethyl-4-pipe | | |
| | ridinyl)- | | |
| 7631-86-9 | Silica, amorphous | Irritant | Eyes, Respiratory system. |
| 1317-65-3 | Calcium carbonate | Irritant | Eyes, Skin. |
| | | Systemic effects | Eyes, Skin, Respiratory system. |
| 13463-67-7 | Titanium dioxide | Systemic effects | Respiratory system. |

LC50 / LD50

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

| CAS-No. | Chemical Name | Route | Value | Species |
|-------------|-----------------------------|-----------|---------------|---------|
| 124172-53-8 | Formamide, | LC50 | > 5.0 mg/l | rat |
| | N,N'-1,6-hexanediylbis[N- | Oral LD50 | > 2,000 mg/kg | rat |
| | (2,2,6,6-tetramethyl-4-pipe | | | |
| | ridinyl)- | | | |

| 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 | | |



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| Product | : Like most thermoplastic plastics the product can be recycled. When 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. |
|---|--|
| Contaminated packaging | : Recycling is preferred when possible. The generator of waste materi 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 TSC Inventory. |
| US. EPA CERCLA Hazardo | us Substances (40 CFR 302) |
| Not applicable | |
| California Proposition 65 | WARNING! This product contains a chemical known to the State o California to cause cancer. |
| SARA Title III Section 302 I | Extremely Hazardous Substance |
| Not applicable | |
| SARA Title III Section 313 7 | Toxic Chemicals: |
| Not applicable Canadian Regulations: | |



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| National Pollutant Release Inventory (NPRI) | | | | | | | |
|---|---|---|--|--|--|--|--|
| Not applicable | | | | | | | |
| WHMIS Classification | : | Not controlled. | | | | | |
| DSL | : | All of the components of this product are listed on the Canadian Inventories or are exempt. However, at least one component of this product is on the Canadian Non-Domestic Substances List (NDSL). Quantity use in Canada is restricted by regulations. | | | | | |
| National Inventories: | | | | | | | |
| Australia AICS | : | Listed | | | | | |
| China IECS | : | Listed | | | | | |
| Europe EINECS | : | Not determined | | | | | |
| 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.