

**POLYONE CORPORATION****MATERIAL SAFETY DATA SHEET****UV ORANGE HM PE**Version Number 1.1  
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Print Date 1/9/2012**1. PRODUCT AND COMPANY IDENTIFICATION****POLYONE CORPORATION**  
33587 Walker Road, Avon Lake, OH 44012Telephone : Product Stewardship (770) 271-5902  
Emergency telephone : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**Product name : UV ORANGE HM PE  
Product code : CC10124251  
Chemical Name : Mixture  
CAS-No. : Mixture  
Product Use : Industrial Applications**2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS**

Components	CAS-No.	Weight percent
1,6-Hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidiny)-,polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products	70624-18-9	5 - 10
Molybdate orange (Lead chromate pigment)	12656-85-8	1 - 5
Titanium dioxide	13463-67-7	1 - 5
Barium sulfate	7727-43-7	5 - 10
Cadmium sulfoselenide orange (Orange 20)	12656-57-4	5 - 10
Calcium carbonate	1317-65-3	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 : Resin particles, like other inert materials, can be mechanically irritating.  
Ingestion : May be harmful if swallowed.

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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.

**Medical Conditions Aggravated by Exposure:** : None known.

**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 : not applicable  
Lower explosion limit : not applicable  
Autoignition temperature : not applicable  
Suitable extinguishing media : Carbon dioxide blanket, Water spray, Dry powder, Foam.  
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 (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), 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

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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.
- Storage : 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)

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Components	Value	Exposure time	Exposure type	List:
Barium sulfate	10 mg/m3	Time Weighted Average (TWA):		ACGIH
	5 mg/m3	Recommended exposure limit (REL):	Respirable.	NIOSH
	10 mg/m3	Recommended exposure limit (REL):	Total	NIOSH
	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	5 mg/m3	Time Weighted Average (TWA):	Respirable fraction.	OSHA Z1A
	10 mg/m3	Time Weighted Average (TWA):	Total dust.	OSHA Z1A
Cadmium sulfoselenide orange (Orange 20)	0.01 mg/m3	Time Weighted Average (TWA):	as Cd	ACGIH
	0.002 mg/m3	Time Weighted Average (TWA):	Respirable fraction. as Cd	ACGIH
	0.005 mg/m3	Time Weighted Average (TWA):		OSHA
	0.0025 mg/m3	OSHA Action level:		OSHA
	0.002 mg/m3	Time Weighted Average (TWA):	Respirable dust. as Cd	MX OEL
	0.01 mg/m3	Time Weighted Average (TWA):	Total dust. as Cd	MX OEL
	0.2 mg/m3	Time Weighted Average (TWA):	as Se	ACGIH
	0.2 mg/m3	PEL:	as Se	OSHA Z1
	0.2 mg/m3	Time Weighted Average (TWA):	as Se	OSHA Z1A
	0.2 mg/m3	Time Weighted Average (TWA):	as Se	MX OEL
Calcium carbonate	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	10 mg/m3	Time Weighted Average (TWA):		MX OEL
	20 mg/m3	Short Term Exposure Limit (STEL):		MX OEL
Molybdate orange (Lead chromate pigment)	0.5 mg/m3	Recommended exposure limit (REL):	as Cr	NIOSH
	0.5 mg/m3	PEL:	as Cr	OSHA Z1
	0.005 mg/m3	Time Weighted Average (TWA):		OSHA
	0.0025 mg/m3	OSHA Action level:		OSHA
	0.05 mg/m3	Time Weighted Average (TWA):	as Pb	ACGIH

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	0.05 mg/m3	Time Weighted Average (TWA):		OSHA
	0.03 mg/m3	OSHA Action level:		OSHA
	0.05 mg/m3	Time Weighted Average (TWA):	as Pb	OSHA Z1A
	0.15 mg/m3	Time Weighted Average (TWA):	Dust and fume. as Pb	MX OEL
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	: solid	Evaporation rate	: Not applicable
Appearance	: pellets	Specific Gravity	: Not determined
Colour	: ORANGE	Bulk density	: Not established
Odour	: very faint	Vapour pressure	: not applicable
Melting point/range	: Not determined	Vapour density	: not applicable
Boiling Point:	: not applicable	pH	: not applicable
Water solubility	: insoluble		

**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.
Hazardous decomposition products	: Carbon dioxide (CO <sub>2</sub> ), carbon monoxide (CO), oxides of nitrogen (NO <sub>x</sub> ), 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:

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CAS-No.	Chemical Name	Effect	Target Organ
70624-18-9	1,6-Hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidinyl)-,polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products	Irritant	Eyes, Skin, Respiratory system.
12656-85-8	Molybdate orange (Lead chromate pigment)	Irritant	Eyes, Skin.
		Systemic effects	central nervous system (CNS), reproductive system.
13463-67-7	Titanium dioxide	Systemic effects	Respiratory system.
7727-43-7	Barium sulfate	Irritant	Respiratory system.
		Systemic effects	Eyes, Respiratory system.
12656-57-4	Cadmium sulfoselenide orange (Orange 20)	Irritant	Eyes, Skin.
		Systemic effects	Liver, Kidney, central nervous system (CNS).
1317-65-3	Calcium carbonate	Irritant	Eyes, Skin.
		Systemic effects	Eyes, Skin, 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
70624-18-9	1,6-Hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidinyl)-,polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products	Oral LD50 Dermal LD50	> 2,000 mg/kg > 3,000 mg/kg	rat rat

**Carcinogenicity**

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

CAS-No.	Chemical Name	OSHA	IARC	NTP
12656-85-8	Molybdate orange (Lead chromate pigment)	yes	1	no
13463-67-7	Titanium dioxide	no	2B	no
12656-57-4	Cadmium sulfoselenide orange (Orange 20)	yes	1	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.

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**Additional Health Hazard Information:**

**Molybdate orange (Lead chromate pigment) 12656-85-8 Systemic effects include neurotoxic, teratogenic, fetotoxic and reproductive with abdominal pain, anemia, pallor, decreased hand grip strength with characteristic "wrist drop".**

**12. ECOLOGICAL INFORMATION**

Persistence and degradability : Not readily biodegradable.

Environmental Toxicity : Chemicals are not readily available as they are bound within the polymer matrix.

Bioaccumulation Potential : Chemicals are not readily available as they are bound within the polymer matrix.

Additional advice : no data available

**13. DISPOSAL CONSIDERATIONS**

Product : 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.

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 : Not regulated for transportation.

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 Hazardous Substances (40 CFR 302)

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not applicable

California Proposition 65 : WARNING! This product contains a chemical known to the State of California to cause cancer., WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

SARA Title III Section 302 Extremely Hazardous Substance

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

SARA Title III Section 313 Toxic Chemicals:

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

Chemical Name	CAS-No.	Weight percent
CADMIUM COMPOUNDSSELENIUM COMPOUNDS	12656-57-4	5.00 - 10.00
CHROMIUM III COMPOUNDSCHROMIUM III COMPOUNDSLEAD COMPOUNDS	12656-85-8	0.10 - 1.00

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

Chemical Name	CAS-No.	Weight percent	NPRI ID#
Cadmium sulfoselenide orange (Orange 20)	12656-57-4	5.00 - 10.00	
		5.00 - 10.00	
Molybdate orange (Lead chromate pigment)	12656-85-8	0.10 - 1.00	

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.
12656-57-4
12656-85-8

DSL : All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

National Inventories:

Australia AICS : Listed





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China IECS : Listed  
Europe EINECS : Listed  
Japan ENCS : Not determined  
Korea KECI : Not determined  
Philippines PICCS : Not determined

**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 used in combination with any other materials or in any process, unless specified in the text.