

MATERIAL SAFETY DATA SHEET

GEON E4257 BROWN 3820

Version Number 1.0
Revision Date 02/04/2003

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION
33587 Walker Road, Avon Lake, OH 44012

NON-EMERGENCY TELEPHONE : Product Stewardship (440)-930-1395

Emergency telephone number : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**

Product name : GEON E4257 BROWN 3820

Product code : VC10001572

Chemical Name : Mixture

CAS-No. : Mixture

Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Components	CAS-No.	Weight %
C.I. Pigment Yellow 53	8007-18-9	0.1 - 1
C.I. Pigment Yellow 164	68412-38-4	1 - 5
Titanium dioxide	13463-67-7	1 - 5
Dibutyltin oxide	818-08-6	1 - 5
Diisotridecyl 3,3'-[(dibutylstannylene)bis(thio)]dipropionate	84896-44-6	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. See Sections 3 and 11 for additional details. This product may contain residual vinyl chloride monomer (VCM) (CAS number 75-01-4) below 8.5 ppm (0.00085%). OSHA considers VCM a suspect carcinogen and regulates it under 29 CFR 1910.1017. It is unlikely, under normal working conditions with adequate ventilation, that the OSHA action level and the OSHA exposure limits will be exceeded for residual VCM. However, the user should take the necessary precautions (e.g. mechanical ventilation, local exhaust ventilation, air-monitoring, respiratory protection, etc.) to ensure airborne levels of any vapors including VCM or dusts that may be released during heating or processing are below regulated levels.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: : Inhalation, Ingestion, Skin contact

Acute exposure

Inhalation : Resin particles, like other inert materials, can be mechanically irritating.

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- Ingestion : 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.

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 : Not applicable
 Lower explosion limit : Not applicable
- Autoignition temperature : Not applicable.
- Suitable extinguishing media : water, dry powder, foam, carbon dioxide (CO₂).
- 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 : May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions.

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. Processing 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. 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:
C.I. Pigment Yellow 164	5 mg/m ³	Ceiling Limit Value:	Dust. as Mn	OSHA Z1
C.I. Pigment Yellow 164	0.5 mg/m ³	PEL:	Dust. as Sb	OSHA Z1
C.I. Pigment Yellow 164	0.2 mg/m ³	Time Weighted Average (TWA):	as Mn	ACGIH
C.I. Pigment Yellow 164	0.5 mg/m ³	Time Weighted Average (TWA):	as Sb	ACGIH
C.I. Pigment Yellow 53	1 mg/m ³	PEL:	as Ni	OSHA Z1
C.I. Pigment Yellow 53	0.5 mg/m ³	PEL:	as Sb	OSHA Z1
C.I. Pigment Yellow 53	0.2 mg/m ³	Time Weighted Average (TWA):	as Ni	ACGIH
C.I. Pigment Yellow 53	0.5 mg/m ³	Time Weighted Average (TWA):	as Sb	ACGIH
Titanium dioxide	10 mg/m ³	Time Weighted Average (TWA):	Dust.	ACGIH
Titanium dioxide	15 mg/m ³	PEL:	Total dust.	OSHA Z1
Dibutyltin oxide	0.1 mg/m ³	Time Weighted Average (TWA):	as Sn	ACGIH
	0.2 mg/m ³	Short Term Exposure Limit (STEL):	as Sn	ACGIH
Dibutyltin oxide	0.1 mg/m ³	PEL:	as Sn	OSHA Z1
Dibutyltin oxide	0.1 mg/m ³	Time Weighted Average (TWA):	as Sn	OSHA Z1A
Diisotridecyl 3,3'-[(dibutylstannylene)bis(thio)]dipropionate	0.1 mg/m ³	Time Weighted Average (TWA):	as Sn	ACGIH
	0.2 mg/m ³	Short Term Exposure Limit (STEL):	as Sn	ACGIH
Diisotridecyl 3,3'-[(dibutylstannylene)bis(thio)]dipropionate	0.1 mg/m ³	PEL:	as Sn	OSHA Z1
Diisotridecyl 3,3'-[(dibutylstannylene)bis(thio)]dipropionate	0.1 mg/m ³	Time Weighted Average (TWA):	as Sn	OSHA Z1A

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Solid	Evaporation rate	: Not applicable.
Appearance	: Pellets, powder	Specific Gravity	: Not determined
Color	: BROWN	Bulk density	: Not established
Odor	: Very faint	Vapor pressure	: Not applicable
Melting point/range	: Not determined	Vapor density	: Not applicable
Boiling Point:	: Not applicable	pH	: Not applicable

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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. Avoid contact with acetal homopolymers and acetal copolymers during processing.

Hazardous decomposition products : Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), other hazardous materials, and smoke are all possible. Prolonged heating (approximately 30 minutes or more) above 392 °F (200 °C) or short term heating at 482 °F (250 °C) may result in product decomposition and evolution of carbon monoxide and hydrogen chloride.

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
8007-18-9	C.I. Pigment Yellow 53	Irritant	Eyes, Skin.
		sensitizer	Skin.
68412-38-4	C.I. Pigment Yellow 164	Irritant	Eyes, Skin.
13463-67-7	Titanium dioxide	Systemic effects	Respiratory system.
818-08-6	Dibutyltin oxide	Irritant	Eyes, Skin, Respiratory system.
		Systemic effects	Respiratory system, Kidney, central nervous system.
		Highly Toxic	Refer to LC50 / LD50 Data on MSDS..
84896-44-6	Diisotridecyl 3,3'-[(dibutylstannylene)bis(thio)]dipropionate	Irritant	Eyes, Skin.

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
818-08-6	Dibutyltin oxide	Oral LD50	44.9 mg/kg	rat

Carcinogenicity:

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

CAS-No.	Chemical Name	OSHA	IARC	NTP
8007-18-9	C.I. Pigment Yellow 53	no	1	2

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.

Additional Health Hazard Information:

C.I. Pigment Yellow 53 8007-18-9 Skin sensitizer "nickel itch", with pulmonary, brain, liver, kidney and muscle effects.

12. ECOLOGICAL INFORMATION

- Persistence and degradability : Not readily biodegradable.
- Environmental Toxicity : Adverse ecological impact is not known or expected under normal use.
- Bioaccumulation Potential : No data available.
- Additional advice : Not applicable

13. DISPOSAL CONSIDERATIONS

- Product : Like most thermoplastics 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 : Not regulated for transportation.
- IMO / IMDG : Not regulated for transportation.

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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 : WARNING! This product contains a chemical known to the State of California to cause cancer.

SARA Title III Section 313 Toxic Chemicals:

Chemical Name	CAS-No.	Weight %
MANGANESE COMPOUNDS ANTIMONY COMPOUNDS	68412-38-4	01.92
NICKEL COMPOUNDS ANTIMONY COMPOUNDS	8007-18-9	00.77

Canadian Regulations:

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.
68412-38-4
818-08-6
84896-44-6

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

National Inventories:

Australia AICS : Listed.

China IECS : Not determined.

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Europe EINECS : Not determined.

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.