

**POLYONE CORPORATION****MATERIAL SAFETY DATA SHEET****BRONZE PVC**Version Number 1.0  
Revision Date 10/21/2009Page 1 of 9  
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 : BRONZE PVC  
Product code : CC10126046  
Chemical Name : Mixture  
CAS-No. : Mixture  
Product Use : Industrial Applications**2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS**

Components	CAS-No.	Weight percent
Calcium stearate	1592-23-0	1 - 5
Carbon black	1333-86-4	1 - 5
Rutile, antimony chromium buff	68186-90-3	5 - 10
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	68412-38-4	10 - 30
Titanium dioxide	13463-67-7	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 : Particulates, like other inert materials can be mechanically irritating. Excessive inhalation of product vapors, especially during heating or processing, may be irritating to respiratory system.  
Ingestion : May be harmful if swallowed.  
Eyes : Particulates, like other inert materials can be mechanically irritating.  
Skin : Experience shows no unusual dermatitis hazard from routine handling.

**POLYONE CORPORATION**

**MATERIAL SAFETY DATA SHEET**

**BRONZE PVC**

Version Number 1.0  
Revision Date 10/21/2009

Page 2 of 9  
Print Date 1/9/2012

**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. 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 plastic, cardboard or metal containers for disposal. Refer to Section

**POLYONE CORPORATION**

**MATERIAL SAFETY DATA SHEET**

**BRONZE PVC**

Version Number 1.0  
Revision Date 10/21/2009

Page 3 of 9  
Print Date 1/9/2012

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)

**POLYONE CORPORATION**

**MATERIAL SAFETY DATA SHEET**

**BRONZE PVC**

Version Number 1.0  
Revision Date 10/21/2009

Page 4 of 9  
Print Date 1/9/2012

Components	Value	Exposure time	Exposure type	List:
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	1 mg/m <sup>3</sup>	Recommended exposure limit (REL):	Fume. as Mn	NIOSH
	3 mg/m <sup>3</sup>	Short Term Exposure Limit (STEL):	Fume. as Mn	NIOSH
	5 mg/m <sup>3</sup>	Ceiling Limit Value:	as Mn	OSHA Z1
	5 mg/m <sup>3</sup>	Ceiling Limit Value:	as Mn	OSHA Z1A
	0.5 mg/m <sup>3</sup>	Time Weighted Average (TWA):	as Sb	ACGIH
	0.5 mg/m <sup>3</sup>	Recommended exposure limit (REL):	as Sb	NIOSH
	0.5 mg/m <sup>3</sup>	PEL:	as Sb	OSHA Z1
	0.5 mg/m <sup>3</sup>	Time Weighted Average (TWA):	as Sb	OSHA Z1A
	0.5 mg/m <sup>3</sup>	Time Weighted Average (TWA):	as Sb	MX OEL
	Calcium stearate	10 mg/m <sup>3</sup>	Time Weighted Average (TWA):	
Carbon black	3.5 mg/m <sup>3</sup>	Time Weighted Average (TWA):		ACGIH
	3.5 mg/m <sup>3</sup>	Recommended exposure limit (REL):		NIOSH
	0.1 mg/m <sup>3</sup>	Recommended exposure limit (REL):		NIOSH
	3.5 mg/m <sup>3</sup>	PEL:		OSHA Z1
	3.5 mg/m <sup>3</sup>	Time Weighted Average (TWA):		OSHA Z1A
	3.5 mg/m <sup>3</sup>	Time Weighted Average (TWA):		MX OEL
	7 mg/m <sup>3</sup>	Short Term Exposure Limit (STEL):		MX OEL
	Rutile, antimony chromium buff	0.5 mg/m <sup>3</sup>	Recommended exposure limit (REL):	as Cr
0.5 mg/m <sup>3</sup>		PEL:	as Cr	OSHA Z1
0.5 mg/m <sup>3</sup>		Time Weighted Average (TWA):	as Sb	ACGIH
0.5 mg/m <sup>3</sup>		Recommended exposure limit (REL):	as Sb	NIOSH
0.5 mg/m <sup>3</sup>		PEL:	as Sb	OSHA Z1
0.5 mg/m <sup>3</sup>		Time Weighted Average (TWA):	as Sb	OSHA Z1A
0.5 mg/m <sup>3</sup>		Time Weighted Average (TWA):	as Sb	MX OEL
Titanium dioxide		10 mg/m <sup>3</sup>	Time Weighted Average (TWA):	
	15 mg/m <sup>3</sup>	PEL:	Total dust.	OSHA Z1

**POLYONE CORPORATION**

**MATERIAL SAFETY DATA SHEET**

**BRONZE PVC**

Version Number 1.0  
Revision Date 10/21/2009

Page 5 of 9  
Print Date 1/9/2012

	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	: BROWN	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	: Avoid contact with strong oxidizers. Also, avoid contact with acetal or acetal copolymers and with amine containing materials during processing. At processing conditions, these materials are mutually destructive and involve rapid degradation. Thoroughly purge and mechanically clean processing equipment to avoid even trace quantities of these materials from coming in contact with each other. Prevent cross contamination of feedstocks.
Hazardous decomposition products	: Carbon dioxide (CO <sub>2</sub> ), carbon monoxide (CO), oxides of nitrogen (NO <sub>x</sub> ), hydrogen chloride (HCl), 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
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**POLYONE CORPORATION**

**MATERIAL SAFETY DATA SHEET**

**BRONZE PVC**

Version Number 1.0  
Revision Date 10/21/2009

Page 6 of 9  
Print Date 1/9/2012

1333-86-4	Carbon black	Systemic effects	Eyes, Respiratory system.
68186-90-3	Rutile, antimony chromium buff	Irritant	Eyes, Skin, Respiratory system.
68412-38-4	Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	Irritant	Eyes, Skin.
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
1592-23-0	Calcium stearate	Oral LD50	> 10 gm/kg	rat
1333-86-4	Carbon black	Oral LD50 Dermal LD50	> 15,400 mg/kg > 3 gm/kg	rat rabbit

**Carcinogenicity**

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

CAS-No.	Chemical Name	OSHA	IARC	NTP
1333-86-4	Carbon black	no	2B	no
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.

**Additional Health Hazard Information:**

**Carbon black 1333-86-4 Carcinogenicity:** Many inhalation toxicologists believe that the tumor response observed in the referenced rat studies is species specific and does not correlate to human exposure. However, the IARC evaluation in Monograph Volume 65, issued in April 1996 concluded that, "There is sufficient evidence in experimental animals for the carcinogenicity of carbon black". Based on this evaluation, along with their evaluation of inadequate evidence of carcinogenicity in humans, IARC's overall evaluation is that "Carbon Black is possibly carcinogenic to humans (Group 2B). The IARC 2B listing only pertains to airborne, unbound carbon black particles of respirable size. Carbon Black has not been listed as a carcinogen by the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA). The National Institute of Occupational Safety and Health (NIOSH) criteria document on carbon black recommends that only carbon black with PAH (polynuclear aromatic hydrocarbon) levels greater than 0.1% be considered suspect carcinogens.

**12. ECOLOGICAL INFORMATION**

Persistence and degradability : Not readily biodegradable.

**POLYONE CORPORATION**

**MATERIAL SAFETY DATA SHEET**

**BRONZE PVC**

Version Number 1.0  
Revision Date 10/21/2009

Page 7 of 9  
Print Date 1/9/2012

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)

not applicable

California Proposition 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.

SARA Title III Section 302 Extremely Hazardous Substance

**POLYONE CORPORATION****MATERIAL SAFETY DATA SHEET****BRONZE PVC**Version Number 1.0  
Revision Date 10/21/2009Page 8 of 9  
Print Date 1/9/2012

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
MANGANESE COMPOUNDSANTIMONY COMPOUNDS	68412-38-4	10.00 - 30.00
CHROMIUM III COMPOUNDSCHROMIUM III COMPOUNDSANTIMONY COMPOUNDS	68186-90-3	5.00 - 10.00

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

Chemical Name	CAS-No.	Weight percent	NPRI ID#
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	68412-38-4	10.00 - 30.00	
		10.00 - 30.00	
Rutile, antimony chromium buff	68186-90-3	5.00 - 10.00	

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.
68412-38-4
1333-86-4
68186-90-3

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  
Europe EINECS : Listed  
Japan ENCS : Not determined  
Korea KECI : Listed





**POLYONE CORPORATION**

**MATERIAL SAFETY DATA SHEET**

**BRONZE PVC**

Version Number 1.0  
Revision Date 10/21/2009

Page 9 of 9  
Print Date 1/9/2012

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