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MATERIAL SAFETY DATA SHEET BROWN 462C TPE

Version Number 1.0 Revision Date 11/17/2006

Product Use

Page 1 of 8 Print Date 11/25/2011

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	:	BROWN 462C TPE
Product code	:	CC10093955
Chemical Name	:	Mixture
CAS-No.	:	Mixture

: Industrial Applications

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Carbon black	1333-86-4	1 - 5
Titanium dioxide	13463-67-7	1 - 5
Calcium carbonate	1317-65-3	5 - 10
Iron oxide	1309-37-1	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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MATERIAL SAFETY DATA SHEET **BROWN 462C TPE**

Version Number 1.0 Revision Date 11/17/2006 Page 2 of 8 Print Date 11/25/2011

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 Special Fire Fighting Procedures Unusual Fire/Explosion Hazards	::	Not applicable Not applicable Not applicable Carbon dioxide blanket, water spray, dry powder, foamnone. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. 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 12 of this MSDS for proper disposal methods.
		7. HANDLING AND STORAGE
Handling		Take measures to prevent the build up of electrostatic charge. Heat



MATERIAL SAFETY DATA SHEET **BROWN 462C TPE**

Version Number 1.0 Revision Date 11/17/2006	Page 3 of 8 Print Date 11/25/2011
Storage :	only in areas with appropriate exhaust ventilation. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.
8. EXPOSU	RE 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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MATERIAL SAFETY DATA SHEET **BROWN 462C TPE**

Version Number 1.0 Revision Date 11/17/2006 Page 4 of 8 Print Date 11/25/2011

Components	Value	Exposure time	Exposure type	List:
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
Carbon black	3.5 mg/m3	Time Weighted Average (TWA):	Total dust. as carbon black	ACGIH
	3.5 mg/m3	PEL:	Total dust. as carbon black	OSHA Z1
Iron oxide	5 mg/m3	Time Weighted Average (TWA):	as Fe	MX OEL
	10 mg/m3	Short Term Exposure Limit (STEL):	as Fe	MX OEL
	5 mg/m3	Time Weighted Average (TWA):	Respirable fraction.	ACGIH
Titanium dioxide	10 mg/m3	Time Weighted Average (TWA):		ACGIH
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	20 mg/m3	Short Term Exposure Limit (STEL):	as Ti	MX OEL

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Appearance Color Odor Melting point/range Boiling Point: Water solubility	: Solid Evaporation rate : Not applicable : Pellets Specific Gravity: : Not determined : BROWN Bulk density : Not established : Very faint Vapor pressure : Not applicable : Not determined Vapour density : Not applicable : Not applicable pH : Not applicable : 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 (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.	

11. TOXICOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET BROWN 462C TPE

Version Number 1.0 Revision Date 11/17/2006

Page 5 of 8 Print Date 11/25/2011

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
1333-86-4	Carbon black	Systemic effects	Eyes, Respiratory system.
13463-67-7	Titanium dioxide	Systemic effects	Respiratory system.
1317-65-3	Calcium carbonate	Irritant	Eyes, Skin.
		Systemic effects	Eyes, Skin, Respiratory system.
1309-37-1	Iron oxide	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
1333-86-4	Carbon black	Oral LD50	>15,400 mg/kg	rat
		Dermal LD50	> 3 gm/kg	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
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

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MATERIAL SAFETY DATA SHEET **BROWN 462C TPE**

sion Number 1.0 /ision Date 11/17/2006	Page 6 Print Date 11/25/2
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 materia 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 TSCA Inventory.
US EDA CEDCI A Hazardous	Substances (40 CFR 302)
US. EFA CERCLA Hazaidous	
Not applicable	

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MATERIAL SAFETY DATA SHEET BROWN 462C TPE

Version Number 1.0 Revision Date 11/17/2006 Page 7 of 8 Print Date 11/25/2011

65

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 %
ZINC COMPOUNDS	12063-19-3	10.00 - 30.00

Canadian Regulations:

National Pollutant Release Inventory (NPRI)			
Chemical Name	CAS-No.	Weight %	NPRI ID#
Zinc iron oxide	12063-19-3	10.00 - 30.00	231

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.	
1333-86-4	
1309-37-1	

:

DSL

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

National Inventories:

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

16. OTHER INFORMATION

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MATERIAL SAFETY DATA SHEET BROWN 462C TPE

Version Number 1.0 Revision Date 11/17/2006

Page 8 of 8 Print Date 11/25/2011

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.