MATERIAL SAFETY DATA SHEET E3360 CLAY

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

Telephone Emergency telephone number	:	1 (440) 930-1000 or 1 (866) POLYONE CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).
Product name	:	E3360 CLAY
Product code	:	VC10001716
Chemical Name	:	Mixture
CAS-No.	:	Mixture
Product Use	:	Industrial Applications

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight percent
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	68412-38-4	1 - 5
Calcium stearate	1592-23-0	1 - 5
Calcium carbonate	471-34-1	1 - 5
Chromium (III) oxide	1308-38-9	1 - 5
Titanium dioxide	13463-67-7	5 - 10

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating or processing. The end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. See sections 8 and 11 for special precautions. May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions.

POTENTIAL HEALTH EFFECTS

Routes of Exposure:	: Inhalation, Ingestion, Skin contact
Acute exposure	
Inhalation	: Resin particles, like other inert materials, can be mechanically irritating.
Ingestion Eyes	May be harmful if swallowed.Resin particles, like other inert materials, are mechanically irritating to



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Skin	eyes. : 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 o 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 a 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. FIREFIGHTING MEASURES
Flash point	: not applicable
Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature Suitable extinguishing media	 not applicable not applicable Not applicable 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	 May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) unde fire conditions. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), 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 no



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: Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal.
7. HANDLING AND STORAGE
: 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.
: Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.
POSURE CONTROLS/PERSONAL PROTECTION
: No personal respiratory protective equipment normally required. If dusty conditions occur wear appropriate respiratory protection.
: Safety glasses with side-shields
: Protective gloves
: Long sleeved clothing
: Safety shoes
: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. This product may contain residual vinyl chloride monomer (VCM) (CAS number 75-01-4) below 8.5 ppm (0.00085%). It is unlikely, under normal working conditions with adequate ventilation, that the 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.
: Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.

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Components	Value	Exposure time	Exposure type	List:
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	1 mg/m3	Recommended exposure limit (REL):	Fume. as Mn	NIOSH
	3 mg/m3	Short Term Exposure Limit (STEL):	Fume. as Mn	NIOSH
	5 mg/m3	Ceiling Limit Value:	as Mn	OSHA Z1
	5 mg/m3	Ceiling Limit Value:	as Mn	OSHA Z1A
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	ACGIH
	0.5 mg/m3	Recommended exposure limit (REL):	as Sb	NIOSH
	0.5 mg/m3	PEL:	as Sb	OSHA Z1
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	OSHA Z1A
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	MX OEL
Calcium stearate	10 mg/m3	Time Weighted Average (TWA):		ACGIH
Calcium carbonate	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
	15 mg/m3	Time Weighted Average (TWA):	Total dust.	OSHA Z1A
	10 mg/m3	Time Weighted Average (TWA):		MX OEL
	20 mg/m3	Short Term Exposure Limit (STEL):		MX OEL
	5 mg/m3	Recommended exposure limit (REL):	Respirable.	NIOSH
	10 mg/m3	Recommended exposure limit (REL):	Total	NIOSH
Chromium (III) oxide	0.5 mg/m3	Recommended exposure limit (REL):	as Cr	NIOSH
	0.5 mg/m3	PEL:	as Cr	OSHA Z1
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

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Form Appearance Colour Odour Melting point/range Boiling Point: Water solubility	 solid pellets, powder TAN very faint Not determined not applicable insoluble 	Evapouration rate Specific Gravity Bulk density Vapour pressure Vapour density pH	: Not established : not applicable	
	10. STABILITY AND	REACTIVITY		
Stability	: The product is stable	e if stored and handled as	prescribed.	
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 (NOx), 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
68412-38-4	Manganese antimony	Irritant	Eyes, Skin.
	titanium brown rutile (C.I.		
	Pigment Yellow 164)		
471-34-1	Calcium carbonate	Irritant	Eyes, Skin.
1308-38-9	Chromium (III) oxide	Irritant	Eyes, Skin.
		sensitizer	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

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471-34-1	Calcium carbonate	Oral	6,450	ratratmouse
		LD50Oral	mg/kg6,450	
		LD50Oral	mg/kg6,450	
		LD50	mg/kg	

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
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:

Chromium (III) oxide 1308-38-9 The bi- and trivalent forms of chrome have a low order of acute toxicity, but may cause skin sensitization and irritation to the eyes. No effects have been reported for chromium (III) oxide. Chromium (III) compounds are not considered carcinogenic in animals or humans.

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 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,

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		14. IKAN	SPORT INFORMA	TION		
U.S. D	OOT Classification	: Not regu	lated for transportation	on.		
ICAO	/IATA	: Not regu	lated for transportation	on.		
IMO/I	MDG (maritime)	: Not regu	lated for transportation	on.		
	· · · ·		LATORY INFORMA			
		13. KEGUI				
US Re	egulations:					
	OSHA Status	: Classifie	ed as hazardous based	on compon	ents.	
	TSCA Status		ponents of this produnventory.	ct are listed	on or exempt	t from the
US. El	PA CERCLA Hazard	lous Substances (4	0 CFR 302)			
[Chemical Name	CAS-No.	RQ for component	RQ for Mixture/	Product	
	Chromium (III) oxide	1308-38-9	010 lbs	950 LB	Tiouuet	
	California Proposit 65	ion : Not app	licable			
	65 Title III Section 302	2 Extremely Hazar	dous Substance	duct is Not	Applicable ur	ider this regul
	65 Title III Section 302	2 Extremely Hazar		duct is Not .	Applicable ur	der this regul
Unless SARA	65 Title III Section 302 s specific chemicals a Title III Section 312	2 Extremely Hazar are identified under 3 Toxic Chemicals	dous Substance r this section, this pro			-
Unless SARA Unless	65 Title III Section 302 s specific chemicals a Title III Section 312 s specific chemicals a	2 Extremely Hazar are identified under 3 Toxic Chemicals	dous Substance r this section, this pro : : r this section, this pro	duct is Not .	Applicable un	nder this regul
Unless SARA Unless Che	65 Title III Section 302 s specific chemicals a Title III Section 312 <u>s specific chemicals a</u> mical Name	2 Extremely Hazar are identified unde 3 Toxic Chemicals are identified unde	dous Substance r this section, this pro : : <u>r this section, this pro</u> CA	duct is Not . S-No.	Applicable un Weight pe	nder this regul
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Unless SARA Unless Che MA COI CHI	65 Title III Section 302 s specific chemicals a Title III Section 312 <u>s specific chemicals a</u> mical Name	2 Extremely Hazar are identified under 3 Toxic Chemicals are identified under DUNDSMANGAN DNY COMPOUNI	dous Substance r this section, this pro- : r this section, this pro- CA ESE 684 DS 684	duct is Not . S-No.	Applicable un Weight pe	nder this regul ercent

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Canadian Regulations:

National Pollutant Release Inventory (NPRI)			
Chemical Name	CAS-No.	Weight	NPRI ID#
Management in the second secon	(0410.20.4		
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	68412-38-4	1.00 - 5.00	
		1.00 - 5.00	
Chromium (III) oxide	1308-38-9	1.00 - 5.00	
Rutile, antimony chromium buff	68186-90-3	0.10 - 1.00	

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.	
68412-38-4	
1308-38-9	

DSL

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

National Inventories:

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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.