

## MATERIAL SAFETY DATA SHEET

# **GREEN 3**

Version Number 1.1 Revision Date 10/09/2001 Page 1 of 6 Print Date 11/1/2011

## 1. PRODUCT AND COMPANY IDENTIFICATION

#### POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

NON-EMERGENCY TELEPHONE	:	Product Stewardship (770) 271-5902
Emergency telephone number	:	CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).
Product name	:	GREEN 3
Product code	:	CC10002443
Chemical Name	:	Mixture
CAS-No.	:	Mixture
Product Use	:	Industrial Applications

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Titanium dioxide	13463-67-7	1 - 5
Chromium (III) oxide	1308-38-9	10 - 30

#### **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 fumes may be released upon heating or crosslinking and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect his employee from exposure. See Sections 3 and 11 for special precautions.

#### POTENTIAL HEALTH EFFECTS

Routes of Exposure:	: Inhalation, Ingestion, Skin contact
Acute exposure	
Inhalation Ingestion	<ul><li>Resin particles, like other inert materials, can be mechanically irritating.</li><li>May be harmful if swallowed.</li></ul>
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.





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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 Lower explosion limit Autoignition temperature Suitable extinguishing media	<ul> <li>Not applicable</li> <li>Not applicable</li> <li>Not relevant</li> <li>Carbon dioxide blanket, water spray, dry powder, foam.</li> </ul>
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	: None
	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 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.

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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       : Safety shoes.         Measures       General Hygiene         General Hygiene       : Handle in accordance with good industrial hygiene and safety practice         Considerations       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)       Ormoments       Value         Engineering measures       : Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       Ormoments       Value         Evenosure limit(s)       0.5 mg/m3       Time Weighted Average       Total dust.       ACGIH         PHYSICAL AND CHEMICAL PROPERTIES       Form       : Solid       Evaporation rate       : Not applicable.         Appearance <t< th=""><th>sion Number 1.1 sion Date 10/09/2001</th><th></th><th></th><th>Print</th><th>Page 3 Date 11/1/2</th></t<>	sion Number 1.1 sion Date 10/09/2001			Print	Page 3 Date 11/1/2
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       :       Safety shoes.         Measures       :       Handle in accordance with good industrial hygiene and safety practice.         Considerations       :       Handle in accordance with good industrial hygiene and safety practice.         Considerations       :       Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :       :       Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :       :       Components       Value       Exposure time       Exposure type       List:         Chromium (III) oxide       0.5 mg/m3       Time Weighted Average       Total dust.       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average       Total dust.       OSHA ZI         Solid       Evaporation rate       :       Not applicable.         Appearance       :       :       Pell	Storage				e absorption
Eye/Face Protection       ::       Safety glasses with side-shields.         Hand protection       ::       Protective gloves.         Skin and body protection       ::       Long sleeved clothing.         Additional Protective       ::       Safety shoes.         Measures       :       Handle in accordance with good industrial hygiene and safety practice         Considerations       :       Handle in accordance with good industrial hygiene and safety practice         Considerations       :       Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :       Exposure time       Exposure type       List:         Chromium (III) oxide       0.5 mg/m3       Time Weighted Average       as Cr       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average       Total dust.       OSHA ZI         Solid       Evaporation rate       :       Not applicable.         Appearance       ::       PHYSICAL AND CHEMICAL PROPERTIES         Form       ::       Solid       Evaporation rate       :       Not applicable.         Appearance       ::       Pellets       Specific Gravity       :       Not applicable         Odor       :       CREEN	8. I	EXPOSURE	CONTROLS / PERSONAL	PROTECTION	
Hand protection       :       Protective gloves.         Skin and body protection       :       Long sleeved clothing.         Additional Protective       :       Safety shoes.         Measures       :       Safety shoes.         General Hygiene       :       Handle in accordance with good industrial hygiene and safety practice Considerations         Considerations       :       Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :       :       Exposure time       Exposure type       List:         Chromium (III) oxide       0.5 mg/m3       Time Weighted Average       as Cr       ACGIH         (TWA):       :       Total dust.       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average       Total dust.       ACGIH         Operance       :       Solid       Evaporation rate       :       Not applicable.         Appearance       :       Pellets       Specific Gravity       :       Not applicable.         Melting point/range       :       Not applicable.       PH       :       Not applicable.         Melting point/range       :       Not applicable       PH       :       Not applicable. <td< td=""><td>Respiratory protection</td><td>: N</td><td>o personal respiratory protecti</td><td>ve equipment normally</td><td>required.</td></td<>	Respiratory protection	: N	o personal respiratory protecti	ve equipment normally	required.
Skin and body protection       : Long sleeved clothing.         Additional Protective       : Safety shoes.         Measures       :         General Hygiene       : Handle in accordance with good industrial hygiene and safety practice         Considerations       : Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Engineering measures       : Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       : Measures       : ACGIH (TWA):         Components       Value       Exposure time       Exposure type       List:         Chromium (III) oxide       0.5 mg/m3       Time Weighted Average       as Cr       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average       Total dust.       ACGIH         Very faint       (TWA):       : Total dust.       OSHA ZI         Persenance       : Pellets       Specific Gravity       : Not applicable.         Appearance       : Pellets       Specific Gravity       : Not applicable.         Odor       : GREEN       Bulk density       : Not applicable         Metting point/range       : Not deprlicable       pH       : Not applicable         Water solubility       : Insoluble	Eye/Face Protection	: S	afety glasses with side-shields.		
Additional Protective Measures       : Safety shoes.         Measures       : 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)       : Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       : Muse Exposure time Exposure type List:         Chromium (III) oxide       0.5 mg/m3         Titanium dioxide       10 mg/m3         Time Weighted Average       as Cr         ACGIH       (TWA):         Total dust.       OSHA ZI         PHYSICAL AND CHEMICAL PROPERTIES         Form       : Solid         Appearance       : Pellets         Specific Gravity       : Not applicable.         Appearance       : Very faint       Vapor density       : Not applicable         Mediting point/range       : Not applicable       pH       : Not applicable         Boiling Point:       : Not applicable       pH       : Not applicable         Water solubility       : Insoluble       : Insoluble       : Not applicable         Hot stabilitity       : Insoluble       : Not appli	Hand protection	: P:	rotective gloves.		
Measures       : 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)       :: Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :: Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :: Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :: Meat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :: Meat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :: Meat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.         Exposure limit(s)       :: Meat only in areas with appropriate exhaust ventilation. ACGIH (TWA):         Titanium dioxide       10 mg/m3       Time Weighted Average       Total dust.       ACGIH         Other is the mg/m3       :: Meat only in the exposure in the mg/m3       : Meat only in the exposure	Skin and body protection	: L	ong sleeved clothing.		
Considerations       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) <ul> <li>Components</li> <li>Value</li> <li>Exposure time</li> <li>Exposure type</li> <li>List:</li> <li>Chromium (III) oxide</li> <li>0.5 mg/m3</li> <li>Time Weighted Average</li> <li>as Cr</li> <li>ACGIH</li> <li>(TWA):</li> <li>Total dust.</li> <li>ACGIH</li> <li>(TWA):</li> <li>Total dust.</li> <li>OSHA ZI</li> </ul> PHYSICAL AND CHEMICAL PROPERTIES           Form         :         Solid         Evaporation rate         :         Not applicable.           Appearance         :         Pellets         Specific Gravity         :         Not determined.           Color         :         GREEN         Bulk density         :         Not applicable.           Melting point/range         :         Not determined.         Vapor pressure         :         Not applicable           Boiling Point:         :         Not applicable         pH         :         Not applicable           Weter solubility         :         Insoluble         :         : </td <td></td> <td>: S</td> <td>afety shoes.</td> <td></td> <td></td>		: S	afety shoes.		
appropriate exhaust ventilation at machinery.         Exposure limit(s) <ul> <li></li></ul>					safety practice
Components       Value       Exposure time       Exposure type       List:         Chromium (III) oxide       0.5 mg/m3       Time Weighted Average       as Cr       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average       Total dust.       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average       Total dust.       ACGIH         (TWA):       15 mg/m3       PEL:       Total dust.       OSHA ZI <b>9. PHYSICAL AND CHEMICAL PROPERTIES</b> Form       :       Solid       Evaporation rate       :       Not applicable.         Appearance       :       Pellets       Specific Gravity       :       Not determined.         Color       :       GREEN       Bulk density       :       Not established         Odor       :       Very faint       Vapor pressure       :       Not applicable         Boiling point/range       :       Not applicable       pH       :       Not applicable         Water solubility       :       Insoluble       :       Not applicable       Not applicable         Hazardous Polymerization       :       Will not occur.       :       Will not occur.       :	Engineering measures				Provide
Chromium (III) oxide       0.5 mg/m3       Time Weighted Average (TWA):       as Cr       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average (TWA):       Total dust.       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average (TWA):       Total dust.       ACGIH         15 mg/m3       PEL:       Total dust.       OSHA Z1         9. PHYSICAL AND CHEMICAL PROPERTIES         Form       :       Solid       Evaporation rate       :       Not applicable.         Appearance       :       Pellets       Specific Gravity       :       Not determined.         Color       :       GREEN       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         Meter solubility       :       Insoluble       :       Not applicable       :         Mater solubility       :       Insoluble       :       Not applicable       :         10. STABILITY AND REACTIVITY <th>Exposure limit(s)</th> <th></th> <th></th> <th></th> <th></th>	Exposure limit(s)				
Chromium (III) oxide       0.5 mg/m3       Time Weighted Average (TWA):       as Cr       ACGIH         Titanium dioxide       10 mg/m3       Time Weighted Average (TWA):       Total dust.       ACGIH         Itanium dioxide       10 mg/m3       Time Weighted Average (TWA):       Total dust.       ACGIH         Itanium dioxide       15 mg/m3       PEL:       Total dust.       OSHA ZI         PHYSICAL AND CHEMICAL PROPERTIES         Form       :       Solid       Evaporation rate       :       Not applicable.         Appearance       :       Pellets       Specific Gravity       :       Not determined.         Color       :       GREEN       Bulk density       :       Not applicable         Melting point/range       :       Not determined.       Vapor pressure       :       Not applicable         Boiling Point:       :       Not applicable       pH       :       Not applicable         Water solubility       :       Insoluble       Insoluble       Insoluble       Stabil.         Hazardous Polymerization       :       Will not occur.       :       Will not occur.	Components	Value	Exposure time	Exposure type	List:
Image: constraint of the system of the sy		0.5 mg/m3	Time Weighted Average		ACGIH
Image: Instant Stability       Image: I	Titanium dioxide	10 mg/m3	• •	Total dust.	ACGIH
Form       : Solid       Evaporation rate       : Not applicable.         Appearance       : Pellets       Specific Gravity       : Not determined.         Color       : GREEN       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         Water solubility       : Insoluble       Insoluble       Insoluble         Iteration         Hazardous Polymerization       : Will not occur.		15 mg/m3		Total dust.	OSHA Z1
Form       : Solid       Evaporation rate       : Not applicable.         Appearance       : Pellets       Specific Gravity       : Not determined.         Color       : GREEN       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         Water solubility       : Insoluble       Insoluble       Insoluble         Iteration         Hazardous Polymerization       : Will not occur.		9. PHYSI(	CAL AND CHEMICAL PRO	PERTIES	
Appearance:PelletsSpecific Gravity:Not determined.Color:GREENBulk density:Not establishedOdor:Very faintVapor pressure:Not applicableMelting point/range:Not determined.Vapor density:Not applicableBoiling Point::Not applicablepH:Not applicableWater solubility:Insoluble:StabilityHazardous Polymerization:Will not occur.					
Color:GREENBulk density:Not establishedOdor:Very faintVapor pressure:Not applicableMelting point/range:Not determined.Vapor density:Not applicableBoiling Point::Not applicablepH:Not applicableWater solubility:InsolubleInsoluble:					
Odor: Very faintVapor pressure: Not applicableMelting point/range: Not determined.Vapor density: Not applicableBoiling Point:: Not applicablepH: Not applicableWater solubility: InsolubleInsolubleIO. STABILITY AND REACTIVITYStabilityHazardous Polymerization: Will not occur.	11				
Melting point/range       : Not determined.       Vapor density       : Not applicable         Boiling Point:       : Not applicable       pH       : Not applicable         Water solubility       : Insoluble       Insoluble       : Not applicable         Stability       : Stable.         Hazardous Polymerization       : Will not occur.       : Will not occur.					
Boiling Point:       : Not applicable       pH       : Not applicable         Water solubility       : Insoluble       : Insoluble       : Insoluble         IO. STABILITY AND REACTIVITY         Stability       : Stable.         Hazardous Polymerization       : Will not occur.					
Water solubility       : Insoluble         10. STABILITY AND REACTIVITY         Stability       : Stable.         Hazardous Polymerization       : Will not occur.			1		
Stability:Stable.Hazardous Polymerization:Will not occur.					uppneuoie
Hazardous Polymerization : Will not occur.		<b>10.</b> S	TABILITY AND REACTIV	<b>TTY</b>	
	Stability	: S	table.		
Conditions to avoid : Keep away from oxidizing agents and open flame. To avoid thermal	Hazardous Polymerizatio	n : W	ill not occur.		
			· · · · · · · · · · · · · · · · · · ·	ts and open flame. To	woid thormal



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sion Date 10/09/2001			Page / Print Date 11/1/
	decomposition	a, do not overheat.	
Incompatible Materials	: Incompatible v	with strong acids and o	oxidizing agents.
Hazardous decomposition products			oxide (CO), oxides of nitrogen and smoke are all possible.
	11. TOXICOLOG	ICAL INFORMATIO	ON
health data for the individuation the individuation the second structure	al components which co	mprise the mixture.	are effects listed are based on ex have the following characteristi
-		-	
CAS-No. 13463-67-7 Tit	Chemical Name anium dioxide	Effect Systemic effects	Target OrganRespiratory system.
			N
	12. ECOLOGIC	AL INFORMATION	I
Persistence and degradabili	ty : Not readily bio	1 1 1 1	
-	.,	odegradable.	
Environmental Toxicity		not readily available a	s they are bound within the matr
-	: Chemicals are of the polymer	not readily available a  not readily available a	is they are bound within the matrices they are bound within the matrices they are bound within the matrices.
Environmental Toxicity	<ul> <li>Chemicals are of the polymer</li> <li>Chemicals are</li> </ul>	not readily available a not readily available a	
Environmental Toxicity Bioaccumulation Potential	<ul> <li>Chemicals are of the polyment</li> <li>Chemicals are of the polyment</li> <li>No data availa</li> </ul>	not readily available a not readily available a	s they are bound within the matri
Environmental Toxicity Bioaccumulation Potential Additional advice	<ul> <li>Chemicals are of the polymer</li> <li>Chemicals are of the polymer</li> <li>Chemicals are of the polymer</li> <li>No data availa</li> <li>13. DISPOSAL</li> <li>Like most ther recycling is pr waste material transportation</li> </ul>	not readily available a not readily available a ble. CONSIDERATIONS moplastics the produc eferred to disposal or	ts they are bound within the matrices they are bound within the matrices the second state of the second state of the generator of the generator of the second state of
Environmental Toxicity Bioaccumulation Potential	<ul> <li>Chemicals are of the polymer</li> <li>Chemicals are of the polymer</li> <li>Chemicals are of the polymer</li> <li>No data availa</li> <li>13. DISPOSAL</li> <li>Like most ther recycling is pr waste material transportation state/provincia</li> <li>Recycling is pr has the respondent</li> </ul>	not readily available a not readily available a the not re	ts they are bound within the matrices they are bound within the matrices the second state of the second state of the generator of the generator of the second state of
Environmental Toxicity Bioaccumulation Potential Additional advice Product	<ul> <li>Chemicals are of the polymer</li> <li>Chemicals are of the polymer</li> <li>Chemicals are of the polymer</li> <li>No data availa</li> <li>13. DISPOSAL</li> <li>Like most ther recycling is pr waste material transportation state/provincia</li> <li>Recycling is pr has the respon and disposal in and local regular</li> </ul>	not readily available a not readily available a the not re	ts they are bound within the matrices they are bound within the matrices to can be recycled. Where possibility incineration. The generator of for proper waste classification, lance with applicable federal, s. e. The generator of waste materi te classification, transportation



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Classification (Non-bulk ground)			
ICAO/IATA	: Not regulate	ed for transportation.	
IMO / IMDG	: Not regulate	ed for transportation.	
	15. REGULAT	ORY INFORMATIC	ON
US Regulations:			
OSHA Status	: Classified a	s hazardous based on c	components.
TSCA Status	: All compon exempt.	ents of this product are	listed on the TSCA inventory or a
California Proposition 65	: This produc	t does not contain a sul	bstance listed by California Prop (
SARA Title III Section 313 To	oxic Chemicals:		
Chemical Nam CHROMIUM	e III COMPOUNDS	CAS-No. 1308-38-9	Weight % 12.34
Canadian Regulations:			
WHMIS Classification	1 : D2B		
WHMIS Ingredient Dis	sclosure List		
CAS-No. 1308-38-9			
DSL	: Listed.		
National Inventories:			
Australia AICS	: Not determine	ned.	
China IECS	: Not determine	ned.	
Europe EINECS	: Not determi	ned.	
Japan ENCS	: Not determi	ned.	
Korea KECI	: Not determi	ned.	
Philippines PICCS	: Not determi	ned.	
		<b>R INFORMATION</b>	

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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.