### MATERIAL SAFETY DATA SHEET PROTO MARIGOLD

Version Number 1.0 Revision Date 11/14/2012

Page 1 of 6 Print Date 11/14/2012

#### 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	:	PROTO MARIGOLD
Product code	:	CC10172325
Chemical Name	:	Mixture
CAS-No.	:	Mixture
Product Use	:	Industrial Applications

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight percent
Calcium carbonate	1317-65-3	1 - 5
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

: Inhalation, Ingestion, Skin contact
: 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.
: Experience shows no unusual dermatitis hazard from routine handling.
: Refer to Section 11 for Toxicological Information.

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# MATERIAL SAFETY DATA SHEET **PROTO MARIGOLD**

Version Number 1.0 Revision Date 11/14/2012 Page 2 of 6 Print Date 11/14/2012

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 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 Special Fire Fighting Procedures Unusual Fire/Explosion Hazards	<ul> <li>not applicable</li> <li>not applicable</li> <li>not applicable</li> <li>Carbon dioxide blanket, Water spray, Dry powder, Foam.</li> <li>Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants.</li> <li>Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.</li> </ul>				
	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 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.				
	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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## MATERIAL SAFETY DATA SHEET **PROTO MARIGOLD**

Version Number 1.0 Revision Date 11/14/2012 Page 3 of 6 Print Date 11/14/2012

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)

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
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

- Form Appearance Colour Odour Melting point/range
- : solid
  : pellets
  : ORANGE
  : very faint
  : Not determined
- Evaporation rate Specific Gravity Bulk density Vapour pressure Vapour density
- Not applicableNot determinedNot establishednot applicablenot applicable

## MATERIAL SAFETY DATA SHEET **PROTO MARIGOLD**

Version Number 1.0 Revision Date 11/14/2012

Page 4 of 6 Print Date 11/14/2012

Boiling Point: Water solubility	: not applicable : insoluble	рН	: not applicable
	10. STABILITY AND F	REACTIVITY	
Stability	: The product is stable i	if stored and hand	dled as prescribed.
Hazardous Polymerization	: Will not occur.		
Conditions to avoid	: Keep away from oxid: decomposition, do not	00	open flame. To avoid thermal
Incompatible Materials	: Incompatible with stro	ong acids and oxi	dizing agents.
Hazardous decomposition products			de (CO), oxides of nitrogen smoke are all possible.

#### **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
1317-65-3	Calcium carbonate	Irritant	Eyes, Skin.
		Systemic effects	Eyes, Skin, Respiratory
			system.
13463-67-7	Titanium dioxide	Systemic effects	Respiratory system.

#### 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.

#### **12. ECOLOGICAL INFORMATION**

Persistence and degradability

: Not readily biodegradable.

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# MATERIAL SAFETY DATA SHEET **PROTO MARIGOLD**

ion Number 1.0 sion Date 11/14/2012	Page 5 Print Date 11/14/2
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 Hazardou	s Substances (40 CFR 302)
not applicable	
California Proposition 65	: Not applicable

## MATERIAL SAFETY DATA SHEET **PROTO MARIGOLD**

Version Number 1.0 Revision Date 11/14/2012 Page 6 of 6 Print Date 11/14/2012

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

Canadian Regulations:

Chemical Name			CAS-No.	Weight	NPRI ID#
			1011.00.1	percent	
Aluminum oxide			1344-28-1	0.10 - 1.00	
WHMIS Classification	:		s of this product a (DSL) or are exe	are on the Canadia empt.	n Domestic
ational Inventories:					
Australia AICS	:	Listed			
China IECS	:	Listed			
Europe EINECS	:	Listed			
Japan ENCS	:	Listed			
Korea KECI	:	Listed			
Philippines PICCS	:	Listed			
			NFORMATION	т	

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.