

**POLYONE CORPORATION****MATERIAL SAFETY DATA SHEET****X GRV-RA-110-W-NAT**Version Number 1.0  
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Print Date 1/4/2012**1. PRODUCT AND COMPANY IDENTIFICATION****POLYONE CORPORATION**  
33587 Walker Road, Avon Lake, OH 44012Telephone : Product Stewardship (440) 930-1395  
Emergency telephone : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**Product name : X GRV-RA-110-W-NAT  
Product code : EM10015329  
Chemical Name : Mixture  
CAS-No. : Mixture  
Product Use : Industrial Applications**2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS**

Components	CAS-No.	Weight %
Titanium dioxide	13463-67-7	0.1 - 1
Tungsten	7440-33-7	60 - 100

**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, Eyes, Skin contact**Acute exposure**Inhalation : Resin particles, like other inert materials, can be mechanically irritating.  
Ingestion : May be harmful if swallowed.  
Eyes : Resin particles, like other inert materials, are mechanically irritating to eyes.  
Skin : Avoid skin contact. Product contains unreacted organic peroxides which may cause mild skin irritation.**Chronic exposure** : Refer to Section 11 for Toxicological Information.

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**Medical Conditions Aggravated by Exposure:** : Individuals with chronic respiratory disorders (i.e. asthma, chronic bronchitis, etc.) may be adversely affected by any airborne contaminant.

**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 relevant

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.

**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

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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. Keep away from heat. Excessive storage temperature and humidity can degrade product performance. Store below 149 °F (65 °C). Rotate stock. Product shelf life is normally 1 year maximum.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory protection : No personal respiratory protective equipment normally required when handling the product itself. See "Engineering Measures" section below for precautions to be taken when heating or processing this material.

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. During processing and cross-linking, product can give off by-products such as alcohols, acetophenone, alpha-methylstyrene, acetone, methane, and ethane. By-product vapors may be flammable. User must provide necessary precautions such as adequate ventilation to prevent accumulation and ignition of vapors. Adequate ventilation and/or appropriate respiratory protection may also be necessary to minimize employee exposure to processing vapors.

Exposure limit(s)

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Components	Value	Exposure time	Exposure type	List:
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):	as Ti	MX OEL
	20 mg/m3	Short Term Exposure Limit (STEL):	as Ti	MX OEL
Tungsten	5 mg/m3	Time Weighted Average (TWA):	as W	ACGIH
	10 mg/m3	Short Term Exposure Limit (STEL):	as W	ACGIH
	5 mg/m3	Time Weighted Average (TWA):	as W	MX OEL
	10 mg/m3	Short Term Exposure Limit (STEL):	as W	MX OEL

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	: Solid	Evaporation rate	: Not applicable
Appearance	: pellets	Specific Gravity	: Not determined
Color	: NO PIGMENT	Bulk density	: Not established
Odour	: characteristic	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	: Strong acids, Oxidizing agents, Reducing agents
Hazardous decomposition products	: Carbon dioxide (CO <sub>2</sub> ), carbon monoxide (CO), oxides of nitrogen (NO <sub>x</sub> ), other hazardous materials, and smoke are all possible. Traces of alcohols, acetophenone, alpha-methylstyrene, acetone, methane, ethane, or other byproducts may be liberated during processing or decomposition.

**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

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This product contains the following components which in their pure form have the following characteristics:

CAS-No.	Chemical Name	Effect	Target Organ
13463-67-7	Titanium dioxide	Systemic effects	Respiratory system.
7440-33-7	Tungsten	Systemic effects	Eyes, Skin, Respiratory system, blood and blood forming 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.

**Additional Health Hazard Information:**

**Tungsten 7440-33-7 Prolonged or repeated breathing of this material may result in chronic bronchitis. Exposure to freshly formed fumes from heated metal may cause "metal fume fever".**

**12. ECOLOGICAL INFORMATION**

- 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 : Not applicable

**13. DISPOSAL CONSIDERATIONS**

- Product : 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 : 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.

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**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. EPA CERCLA Hazardous Substances (40 CFR 302)

Not applicable

California Proposition : Not applicable  
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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:

National Pollutant Release Inventory (NPRI)

Not applicable

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

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CAS-No.
7440-33-7

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 : Not determined

**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.