



GEOGARD BASE COAT GREY 5 GL PL (M)

Version 3.
REVISION DATE: 06/29/2009

Print Date 07/07/2009

SECTION 1 - PRODUCT IDENTIFICATION

Trade name : GEOGARD BASE COAT GREY 5 GL PL (M)
Product code : 49105

COMPANY : Republic Powdered Metals
2628 Pearl Road
Medina, OH 44256

Telephone : (800) 551-7081
Emergency Phone: : 1-800-551-7081
After Hours: Chemtrec 1-800-424-9300

Product use : Coating

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview

Gray. Liquid. May cause drowsiness, weakness, and fatigue. Vapor and/or mist may irritate nose and throat. May cause moderate irritation to the respiratory system. May cause allergic respiratory sensitization. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : May cause drowsiness, weakness, and fatigue. Vapor and/or mist may irritate nose and throat. May cause moderate irritation to the respiratory system. May cause allergic respiratory sensitization.

Eyes : Vapor and/or mist may cause eye irritation.

Ingestion : May cause irritation to the mouth, throat and stomach. May cause gastrointestinal irritation, nausea, and vomiting.

Skin : May cause sensitization resulting in irritation, itching and redness.

Aggravated Medical Conditions

Pre-existing eye, skin, liver, kidney, and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

Overexposure may cause dermatitis, asthma, skin and respiratory sensitization and decreased lung function. Repeated overexposure to vapors and/or material may injure the liver, kidneys and respiratory system unless suitable engineering controls and/or personal protective equipment are used. Prolonged or repeated contact/exposure to aromatic petroleum distillates may cause defatting, drying, and irritation of the skin, dermatitis, and central nervous system (CNS) effects. Inhalation of crystalline silica (quartz) can cause cancer based on animal data, and IARC concludes sufficient evidence in humans (Group 1). Prolonged and repeated overexposure to free crystalline silica dust above the TLV level may cause scarring of the lungs with cough and shortness of breath. A delayed lung injury, silicosis may result from breathing free silica. A long-term NTP study showed that oral exposure to toluene diisocyanate (TDI) caused cancer in rats and mice. A lifetime inhalation study sponsored by the International Isocyanate Institute did not show carcinogenic activity in rats. May cause allergic skin and respiratory sensitization. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

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Target Organs: Eye, Lung, Liver, Kidney, Skin, Nerve**SECTION 3 - PRODUCT COMPOSITION**

Chemical Name	CAS-No.	Weight %
Aromatic Polyisocyanate Resin	NJTSRN# 51721300-5270P	30.0 - 60.0
Aromatic petroleum distillates	64742-95-6	10.0 - 30.0
Clay	1332-58-7	10.0 - 30.0
Calcium Carbonate (Limestone)	1317-65-3	10.0 - 30.0
Tackifier	NJTSRN# 51721300-5272P	7.0 - 13.0
1,2,4-Trimethylbenzene	95-63-6	7.0 - 13.0
Titanium dioxide	13463-67-7	3.0 - 7.0
1,3,5-Trimethylbenzene	108-67-8	1.0 - 5.0
Trimethyl benzene (mixed isomers)	25551-13-7	1.0 - 5.0
Butyl benzyl phthalate	85-68-7	- <1.0
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	- <1.0
2,4-Toluene diisocyanate	584-84-9	- <1.0
Toluene-2,6-Diisocyanate	91-08-7	- <0.1

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation	:	Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.
Eye contact	:	Flush with water for at least 15 minutes while holding eye lids apart. Get medical attention immediately.
Skin contact	:	Wash area of contact thoroughly with hand cleaner followed by soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
Ingestion	:	Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point	:	118 F, 48 C
Method	:	Setaflash Closed Cup
Lower explosion limit	:	Not available.
Upper explosion limit	:	Not available.
Autoignition temperature	:	Not available.
Extinguishing media	:	If water fog is ineffective, use carbon dioxide, dry chemical or foam.
Hazardous combustion products	:	Carbon monoxide and carbon dioxide can form. Smoke, fumes. Hydrocyanic acid and nitrogen oxides can form.



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- Protective equipment for firefighters : Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
- Fire and explosion conditions : Product may ignite if heated in excess of its flash point. Closed container, may burst when exposed to extreme heat. Empty containers may contain ignitable vapors. Vapors may travel to sources of ignition and flashback.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

SECTION 7 - HANDLING AND STORAGE

Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Change soiled work clothes frequently. Clean hands thoroughly after handling. Do not smoke, weld, generate sparks, or use flame near container. To prevent generation of static discharges, use bonding/grounding connection when pouring liquid. Extinguish all ignition sources including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Store under dry warehouse conditions away from heat and all ignition sources.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection equipment

- Respiratory protection : Wear appropriate, properly fitted NIOSH/MSHA approved respirator when airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Select positive pressure supplied air respirator (TC19C or equivalent) for isocyanates.
- Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.
- Eye protection : Wear appropriate eye protection. Wear chemical safety goggles and/or face shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily available.
- Skin and body protection : Prevent contact with shoes and clothing.
- Protective measures : Use professional judgment in the selection, care, and use.
- Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed areas. Use local exhaust when the general ventilation is inadequate.

Exposure Limits

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Chemical Name	CAS Number	Regulation	Limit	Form
Clay	1332-58-7	ACGIH TWA: OSHA PEL: OSHA PEL: OSHA TWA: OSHA TWA:	2 mg/m3 15 mg/m3 5 mg/m3 15 mg/m3 5 mg/m3	Respirable fraction. Total dust. Respirable fraction. Total dust. Respirable fraction.
Calcium Carbonate (Limestone)	1317-65-3	OSHA PEL: OSHA PEL: ACGIH TWA: ACGIH TWA: OSHA TWA: OSHA TWA:	5 mg/m3 15 mg/m3 3 mg/m3 10 mg/m3 15 mg/m3 5 mg/m3	Respirable fraction. Total dust. Respirable particles. Inhalable particles. Total dust. Respirable fraction.
1,2,4-Trimethylbenzene	95-63-6	ACGIH TWA:	25 ppm	
Titanium dioxide	13463-67-7	ACGIH TWA: OSHA PEL: OSHA TWA: OSHA TWA:	10 mg/m3 15 mg/m3 15 mg/m3 5 mg/m3	Total dust. Total dust. Respirable fraction.
1,3,5-Trimethylbenzene	108-67-8	ACGIH TWA:	25 ppm	
Trimethyl benzene (mixed isomers)	25551-13-7	ACGIH TWA:	25 ppm	
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	OSHA TWA: OSHA TWA: OSHA PEL: OSHA PEL: ACGIH TWA:	0.1 mg/m3 0.3 mg/m3 15 mg/m3 5 mg/m3 0.025 mg/m3	Respirable. Total dust. Total dust. Respirable fraction. Respirable fraction.
2,4-Toluene diisocyanate	584-84-9	ACGIH TWA: ACGIH STEL:	0.005 ppm 0.02 ppm	
Toluene-2,6-Diisocyanate	91-08-7	ACGIH TWA: ACGIH STEL:	0.005 ppm 0.02 ppm	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid
Color : Gray
Odor : Solvent
pH : Not available.
Vapour pressure : Not available.
Vapor density : Heavier than air



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Melting point/range : Not available.
Freezing point : Not available.
Boiling point/range : Not available.
Water solubility : Negligible
Specific Gravity : 1.177
% Volatile Weight : 26 %

SECTION 10 - REACTIVITY / STABILITY

Substances to avoid : Strong acids.Strong bases.Amines.Water or moisture.Alcohols.
Stability : Material is stable under normal storage, handling, and use.
Hazardous polymerization : Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Trimethyl benzene (mixed isomers), CAS-No.: 25551-13-7
Acute oral toxicity (LD-50 oral) 8,970 mg/kg (Rat)
Butyl benzyl phthalate, CAS-No.: 85-68-7
Acute oral toxicity (LD-50 oral) 13,500 mg/kg (Rat)
2,4-Toluene diisocyanate, CAS-No.: 584-84-9
Acute oral toxicity (LD-50 oral) 5,800 mg/kg (Rat)
Acute inhalation toxicity (LC-50) 14 mg/l for 4 h (Rat) 10 mg/l for 4 h (Mouse) 13 mg/l for 4 h (Guinea pig) 11 mg/l for 4 h (Rabbit)

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

RCRA Class : D001: Reportable Quantity = 100 lbs. (Characteristic of ignitability)
This classification applies only to the material as it was originally produced.
Disposal Method : Subject to hazardous waste treatment, storage, and disposal requirements under RCRA. Recycle or incinerate waste at EPA approved facility or dispose of in compliance with federal, state and local regulations.



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SECTION 14 - TRANSPORTATION / SHIPPING DATA

TDG / DOT Shipping Description:

NOT REGULATED

SECTION 15 - REGULATORY INFORMATION

North American Inventories:

All components are listed or exempt from the TSCA inventory.
This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

U.S. Federal Regulations:

SARA 313 Components : 1,2,4-Trimethylbenzene 95-63-6
2,4-Toluene diisocyanate 584-84-9

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard
Fire Hazard

OSHA Hazardous Components :

Clay 1332-58-7
Calcium Carbonate (Limestone) 1317-65-3
1,2,4-Trimethylbenzene 95-63-6
Titanium dioxide 13463-67-7
1,3,5-Trimethylbenzene 108-67-8
Trimethyl benzene (mixed isomers) 25551-13-7
Butyl benzyl phthalate 85-68-7
Crystalline Silica (Quartz)/ Silica Sand 14808-60-7
2,4-Toluene diisocyanate 584-84-9
Toluene-2,6-Diisocyanate 91-08-7

OSHA Status: Considered : Irritant
hazardous based on the Sensitizer
following criteria: Carcinogen

OSHA Flammability : II

Regulatory VOC (less water and : 314 g/l
exempt solvent)

VOC Method 310 : 26 %

Chemical is listed as an IARC, NTP, OSHA, or ACGIH Carcinogen:

Butyl benzyl phthalate 85-68-7
Crystalline Silica (Quartz)/ Silica Sand 14808-60-7

U.S. State Regulations:

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<p>MASS RTK Components</p>	<p>:</p>	<p>Clay 1332-58-7 Calcium Carbonate (Limestone) 1317-65-3 1,2,4-Trimethylbenzene 95-63-6 Titanium dioxide 13463-67-7 1,3,5-Trimethylbenzene 108-67-8 Trimethyl benzene (mixed isomers) 25551-13-7 Crystalline Silica (Quartz)/ Silica Sand 14808-60-7 2,4-Toluene diisocyanate 584-84-9 Toluene-2,6-Diisocyanate 91-08-7</p>
<p>Penn RTK Components</p>	<p>:</p>	<p>Aromatic Polyisocyanate Resin NJTSRN# 51721300-5270P Aromatic petroleum distillates 64742-95-6 Clay 1332-58-7 Calcium Carbonate (Limestone) 1317-65-3 Tackifier NJTSRN# 51721300-5272P 1,2,4-Trimethylbenzene 95-63-6 Titanium dioxide 13463-67-7 1,3,5-Trimethylbenzene 108-67-8 Trimethyl benzene (mixed isomers) 25551-13-7 2,4-Toluene diisocyanate 584-84-9</p>
<p>NJ RTK Components</p>	<p>:</p>	<p>Aromatic Polyisocyanate Resin NJTSRN# 51721300-5270P Aromatic petroleum distillates 64742-95-6 Clay 1332-58-7 Calcium Carbonate (Limestone) 1317-65-3 Tackifier NJTSRN# 51721300-5272P 1,2,4-Trimethylbenzene 95-63-6 Titanium dioxide 13463-67-7 Trimethyl benzene (mixed isomers) 25551-13-7 Butyl benzyl phthalate 85-68-7 Crystalline Silica (Quartz)/ Silica Sand 14808-60-7</p>

WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm:

85-68-7	Butyl benzyl phthalate
14808-60-7	Crystalline Silica (Quartz)/ Silica Sand
584-84-9	2,4-Toluene diisocyanate
1333-86-4	Carbon Black
91-08-7	Toluene-2,6-Diisocyanate
108-88-3	Toluene
71-43-2	Benzene
91-20-3	Naphthalene



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SECTION 16 - OTHER INFORMATION

HMIS Rating :

Health	2
Flammability	2
Reactivity	1
PPE	

0 = Minimum
1 = Slight
2 = Moderate
3 = Serious
4 = Severe

Further information:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Prepared by: Rich Mikol

Legend

ACGIH - American Conference of Governmental Hygienists
NTP - National Toxicology Program
DOT - Department of Transportation
DSL - Domestic Substance List
EPA - Environmental Protection Agency
HMIS - Hazardous Materials Information System
IARC - International Agency for Research on Cancer
MSHA - Mine Safety Health Administration
NDSL - Non-Domestic Substance List
NIOSH - National Institute for Occupational Safety and Health
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit
RCRA - Resource Conservation and Recovery Act
RTK - Right To Know
SARA - Superfund Amendments and Reauthorization Act
STEL - Short Term Exposure Limit
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
V - Volume
VOC - Volatile Organic Compound
WHMIS - Workplace Hazardous Materials Information System