



GEOGARD PRIMER 5 GAL

Version 3.
REVISION DATE: 06/29/2009

Print Date 07/07/2009

SECTION 1 - PRODUCT IDENTIFICATION

Trade name : GEOGARD PRIMER 5 GAL
Product code : 49405

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

Light Yellow. Liquid. May cause moderate irritation to the respiratory system. May cause nausea, headaches, and dizziness. May cause drowsiness, weakness, and fatigue. 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 moderate irritation to the respiratory system. May cause nausea, headaches, and dizziness. May cause drowsiness, weakness, and fatigue.

Eyes : Vapor and/or mist may cause eye irritation. Direct contact may cause temporary redness and discomfort.

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

Skin : May cause moderate irritation.

Aggravated Medical Conditions

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

Chronic Health Effects

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Prolonged or repeated exposure to xylene may cause defatting, drying, and irritation of the skin, dermatitis, central nervous system (CNS) effects, heart muscle sensitization and arrhythmia, hearing loss, and brain, liver, kidney damage. Xylene overexposure may affect fetal development. Overexposure to methyl isobutyl ketone can cause narcosis and can adversely affect the central nervous system and cardiovascular system. 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. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Diphenylmethane diisocyanate (methylene bisphenyl isocyanate) caused an increased incidence of lung tumors in experimental animals following long term inhalation at concentrations in

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excess of 100 times the exposure limit. Prolonged or repeated exposure may cause defatting, drying, and irritation of the skin, dermatitis, central nervous system (CNS) effects, heart muscle sensitization and arrhythmia, hearing loss, and brain, liver, kidney, and testes damage. Toluene overexposure may cause burns of the skin, respiratory tract damage. May be harmful to the human fetus based on animal tests and limited epidemiology data. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

Target Organs: Skin, Eye, Lung, Liver, Kidney, Nerve, Reproductive

SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
Xylene	1330-20-7	> 60.0
Ethylbenzene	100-41-4	15.0 - 40.0
Polyurethane polymer	NJTSRN# 51721300-5123P	5.0 - 10.0
4,4'-Methylene bis(phenylisocyanate)	101-68-8	1.0 - 5.0
Methyl isobutyl ketone	108-10-1	1.0 - 5.0
Toluene	108-88-3	1.0 - 5.0

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	:	Clean area of contact thoroughly using 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	:	81 °F, 27 °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	:	Smoke, fumes. Carbon monoxide and carbon dioxide can form. 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). Water may be used to cool containers to minimize pressure build-up.
- Fire and explosion conditions : Vapor concentrations in enclosed areas may ignite explosively. Product may ignite if heated in excess of its flash point. Vapors may travel to sources of ignition and flashback. Closed container, may burst when exposed to extreme heat. Empty containers may contain ignitable vapors.

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. 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. Personal protective equipment must be worn during maintenance or repair of contaminated mixer, reactor, or other equipment. Keep container closed when not in use. Vapor may migrate to sources of ignition. Do not smoke, weld, generate sparks, or use flame near container. Store in sealed containers in a cool, dry, ventilated warehouse location.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection equipment

- Respiratory protection : Wear appropriate, properly fitted NIOSH/MSHA approved organic vapor or supplied air respirator when airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- 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.
- Protective measures : Use professional judgment in the selection, care, and use. Inspect and replace equipment at regular intervals.
- 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
Xylene	1330-20-7	ACGIH TWA: ACGIH STEL: OSHA PEL:	100 ppm 150 ppm 435 mg/m ³	
Ethylbenzene	100-41-4	ACGIH TWA: ACGIH STEL: OSHA PEL:	100 ppm 125 ppm 435 mg/m ³	
4,4'-Methylene bis(phenylisocyanate)	101-68-8	ACGIH TWA:	0.005 ppm	
Methyl isobutyl ketone	108-10-1	ACGIH TWA: ACGIH STEL: OSHA PEL:	50 ppm 75 ppm 410 mg/m ³	
Toluene	108-88-3	ACGIH TWA: OSHA TWA:	20 ppm 200 ppm	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form	: Liquid
Color	: Light Yellow
Odor	: Aromatic Solvent
pH	: Not available.
Vapour pressure	: Not available.
Vapor density	: Heavier than air
Melting point/range	: Not available.
Freezing point	: Not available.
Boiling point/range	: > 250 °F, > 121 °C
Water solubility	: Negligible
Specific Gravity	: 0.899
% Volatile Weight	: 90 %

SECTION 10 - REACTIVITY / STABILITY

Substances to avoid	: Oxidizing agents.Strong acids.Strong bases.
Stability	: Stable under normal conditions. Avoid welding arcs, flames or other high temperature sources.
Hazardous polymerization	: Will not occur.

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SECTION 11 - TOXICOLOGICAL INFORMATION

Xylene, CAS-No.: 1330-20-7	
Acute oral toxicity (LD-50 oral)	4,300 mg/kg (Rat) 1,590 mg/kg (Mouse) 6,670 mg/kg (Rat) 3,523 - 8,600 mg/kg (Rat) 5,627 mg/kg (Mouse)
Acute inhalation toxicity (LC-50)	6,350 mg/l for 4 h (Rat) 3,907 mg/l for 6 h (Mouse) 8,000 mg/l for 4 h (Rat)
Ethylbenzene, CAS-No.: 100-41-4	
Acute oral toxicity (LD-50 oral)	5,460 mg/kg (Rat) 3,500 mg/kg (Rat)
Acute dermal toxicity (LD-50 dermal)	17,800 mg/kg (Rabbit)
4,4'-Methylene bis(phenylisocyanate), CAS-No.: 101-68-8	
Acute inhalation toxicity (LC-50)	0.369 mg/l for 4 h (Rat) 0.38 mg/l for 4 h (Rat)
Methyl isobutyl ketone, CAS-No.: 108-10-1	
Acute oral toxicity (LD-50 oral)	2,080 mg/kg (Rat)
Acute dermal toxicity (LD-50 dermal)	16,000 mg/kg (Rabbit)
Toluene, CAS-No.: 108-88-3	
Acute oral toxicity (LD-50 oral)	2,600 - 7,500 mg/kg (Rat) 5,000 mg/kg (Rat)
Acute inhalation toxicity (LC-50)	26,700 mg/l for 1 h (Rat) 400 mg/l for 24 h (Mouse) 5,320 mg/l for 8 h (Mouse)
Acute dermal toxicity (LD-50 dermal)	12,124 mg/kg (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.

SECTION 14 - TRANSPORTATION / SHIPPING DATA**TDG / DOT Shipping Description:**

ADHESIVES, 3, UN1133, PG III

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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	:	Xylene	1330-20-7
		Ethylbenzene	100-41-4
		4,4'-Methylene bis(phenylisocyanate)	101-68-8
		Methyl isobutyl ketone	108-10-1
		Toluene	108-88-3

SARA 311/312 Hazards	:	Acute Health Hazard
		Fire Hazard

OSHA Hazardous Components :

Xylene	1330-20-7
Ethylbenzene	100-41-4
4,4'-Methylene bis(phenylisocyanate)	101-68-8
Methyl isobutyl ketone	108-10-1
Toluene	108-88-3

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

OSHA Flammability : IC

Regulatory VOC (less water and : 818 g/l
exempt solvent)

VOC Method 310 : 90 %

U.S. State Regulations:

MASS RTK Components	:	Xylene	1330-20-7
		Ethylbenzene	100-41-4
		4,4'-Methylene bis(phenylisocyanate)	101-68-8
		Methyl isobutyl ketone	108-10-1
		Toluene	108-88-3

Penn RTK Components	:	Xylene	1330-20-7
		Ethylbenzene	100-41-4
		Polyurethane polymer	NJTSRN# 51721300-5123P
		4,4'-Methylene bis(phenylisocyanate)	101-68-8
		Methyl isobutyl ketone	108-10-1
		Toluene	108-88-3

NJ RTK Components	:	Xylene	1330-20-7
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Ethylbenzene	100-41-4
Polyurethane polymer	NJTSRN# 51721300-5123P
4,4'-Methylene bis(phenylisocyanate)	101-68-8
Methyl isobutyl ketone	108-10-1
Toluene	108-88-3

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

100-41-4	Ethylbenzene
108-88-3	Toluene

SECTION 16 - OTHER INFORMATION

HMIS Rating :

Health	2
Flammability	3
Reactivity	2
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

