SECTION 1 - PRODUCT IDENTIFICATION

Trade name : SOLARGARD SEAM SEALER WHITE 5 GAL
Product code : 1511700005P

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 : Sealant

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview
White. Non-sag gunnable paste. May cause slight irritation to the respiratory system. May cause nausea, headaches, and dizziness. May cause drowsiness, weakness, and fatigue. May cause allergic respiratory sensitization. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel.

Acute Potential Health Effects/ Routes of Entry

Inhalation : May cause slight irritation to the respiratory system. May cause nausea, headaches, and dizziness. May cause drowsiness, weakness, and fatigue. May cause allergic respiratory sensitization.

Eyes : Direct contact may cause mild irritation.

Ingestion : May cause gastrointestinal irritation, nausea, and vomiting.

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

Aggravated Medical Conditions
Pre-existing eye, skin and respiratory disorders may be aggravated by exposure.

Chronic Health Effects
Overexposure may cause dermatitis, asthma, skin and respiratory sensitization and decreased lung function. 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. Prolonged or repeated exposure to butyl benzyl phthalate may cause reduced body weights and adverse effects on the liver, kidney, spleen, pancreas, and reproductive organs. 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. Fillers are encapsulated and not expected to be released from product under normal conditions of use. Prolonged or repeated exposure to mineral spirits (petroleum naphtha or stoddard solvent) may cause defatting, drying, and irritation of the skin, dermatitis, central nervous system (CNS) effects, and adverse liver, kidney, and lung effects.
**Material Safety Data Sheet**

**SOLARGARD SEAM SEALER WHITE 5 GAL**

Version 2.

REVISION DATE: 06/29/2009

Print Date 07/07/2009

**Target Organs:** Skin, Eye, Ingestion, Lung

### SECTION 3 - PRODUCT COMPOSITION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane Polymer</td>
<td>NJTSRN# 51721300-5358P</td>
<td>15.0 - 40.0</td>
</tr>
<tr>
<td>Butyl benzyl phthalate</td>
<td>85-68-7</td>
<td>15.0 - 40.0</td>
</tr>
<tr>
<td>Calcium Carbonate (Limestone)</td>
<td>1317-65-3</td>
<td>15.0 - 40.0</td>
</tr>
<tr>
<td>Polyvinyl chloride</td>
<td>9002-86-2</td>
<td>15.0 - 40.0</td>
</tr>
<tr>
<td>Stoddard solvent (Mineral Spirits)</td>
<td>8052-41-3</td>
<td>3.0 - 7.0</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>1.0 - 5.0</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>1.0 - 5.0</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>1.0 - 5.0</td>
</tr>
<tr>
<td>Disodecyi phthalate</td>
<td>26761-40-0</td>
<td>- &lt;1.0</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>- &lt;1.0</td>
</tr>
<tr>
<td>Isophorone Diisocyanate</td>
<td>4098-71-9</td>
<td>- &lt;1.0</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz)/ Silica Sand</td>
<td>14808-60-7</td>
<td>- &lt;0.1</td>
</tr>
</tbody>
</table>

### SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

**Inhalation**: Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel.

**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** : Not available.

**Method** : Not available.

**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. Hydrocyanic acid and nitrogen oxides can form.
SOLARGARD SEAM SEALER WHITE 5 GAL
Version 2.
REVISION DATE: 06/29/2009

Protective equipment for firefighters: Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Scrape up and transfer to appropriate container for disposal.

SECTION 7 - HANDLING AND STORAGE

Prevent inhalation of vapor, ingestion and contact with skin, eyes and clothing. Preferably use entire contents in one continuous work session. Do not smoke, weld, generate sparks, or use flame near container. Change soiled work clothes frequently. Clean hands thoroughly after handling. Do not store or use near food. Keep container closed when not in use. Since emptied containers retain product residue and vapor, observe precautions even after container is emptied. 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 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. Use safety glasses if eye contact is likely.

Skin and body protection: Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before reuse.

Protective measures: Use professional judgment in the selection, care, and use.

Engineering measures: Use general ventilation and/or local exhaust to reduce the airborne contaminant concentration below the exposure limit listed in the MSDS.

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Regulation</th>
<th>Limit</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate (Limestone)</td>
<td>1317-65-3</td>
<td>OSHA PEL:</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH TWA:</td>
<td>3 mg/m3</td>
<td>Respirable particles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH TWA:</td>
<td>10 mg/m3</td>
<td>Inhalable particles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>
## Material Safety Data Sheet

**SOLARGARD SEAM SEALER WHITE 5 GAL**

**Version 2**  
**REVISION DATE:** 06/29/2009  
**Print Date:** 07/07/2009

### Chemicals

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Regulation</th>
<th>Limit</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvinyl chloride</td>
<td>9002-86-2</td>
<td>ACGIH TWA:</td>
<td>1 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td>Stoddard solvent (Mineral Spirit)</td>
<td>8052-41-3</td>
<td>ACGIH TWA:</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>2,900 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>ACGIH TWA:</td>
<td>10 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>15 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>ACGIH TWA:</td>
<td>2 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>ACGIH TWA:</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH STEL:</td>
<td>150 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>435 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>ACGIH TWA:</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH STEL:</td>
<td>125 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>435 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Isophorone Diisocyanate</td>
<td>4098-71-9</td>
<td>ACGIH TWA:</td>
<td>0.005 ppm</td>
<td></td>
</tr>
<tr>
<td>Crystalline Silica (Quartz)/Silica Sand</td>
<td>14808-60-7</td>
<td>OSHA TWA:</td>
<td>0.1 mg/m3</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA TWA:</td>
<td>0.3 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL:</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH TWA:</td>
<td>0.025 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- **Form:** Non-sag gunnable paste
- **Color:** White
- **Odor:** Petroleum Solvent
- **pH:** Not available.
- **Vapour pressure:** Not available.
- **Vapor density:** Heavier than air
- **Melting point/range:** Not available.
- **Freezing point:** Not available.
Material Safety Data Sheet

SOLARGARD SEAM SEALER WHITE 5 GAL
Version 2
REVISION DATE: 06/29/2009

Boiling point/range : Not available.
Water solubility : Insoluble
Specific Gravity : 1.288
% Volatile Weight : 7%

SECTION 10 - REACTIVITY / STABILITY

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

SECTION 11 - TOXICOLOGICAL INFORMATION

Butyl benzyl phthalate, CAS-No.: 85-68-7
   Acute oral toxicity (LD-50 oral) 13,500 mg/kg (Rat)
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)
Isophorone Diisocyanate, CAS-No.: 4098-71-9
   Acute oral toxicity (LD-50 oral) 2,500 mg/kg (Mouse) 1,000 mg/kg (Rat)
   Acute inhalation toxicity (LC-50) 0.033 mg/l for 4 h (Rat) 0.123 mg/l for 4 h (Rat)
   Acute dermal toxicity (LD-50 dermal) 1,060 mg/kg (Rat)

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Material Safety Data Sheet

SOLARGARD SEAM SEALER WHITE 5 GAL

Version 2
REVISION DATE: 06/29/2009

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 : Xylene 1330-20-7
                      : Ethylbenzene 100-41-4
SARA 311/312 Hazards : Acute Health Hazard

OSHA Hazardous Components:
Butyl benzyl phthalate 85-68-7
Calcium Carbonate (Limestone) 1317-65-3
Polyvinyl chloride 9002-86-2
Stoddard solvent (Mineral Spirits) 8052-41-3
Titanium dioxide 13463-67-7
Calcium oxide 1305-78-8
Xylene 1330-20-7
Diisodecyl phthalate 26761-40-0
Ethylbenzene 100-41-4
Isophorone Disocyanate 4098-71-9
Crystalline Silica (Quartz)/ Silica Sand 14808-60-7

OSHA Status: Considered hazardous based on the following criteria:
OSHA Flammability : Not Regulated
Regulatory VOC (less water and exempt solvent) : 103 g/l
VOC Method 310 : 7 %

Chemical is listed as an IARC, NTP, OSHA, or ACGIH Carcinogen:
Butyl benzyl phthalate 85-68-7

U.S. State Regulations:
MASS RTK Components : Butyl benzyl phthalate 85-68-7
                      : Calcium Carbonate (Limestone) 1317-65-3
Material Safety Data Sheet

SOLARGARD SEAM SEALER WHITE 5 GAL

Version 2
REVISION DATE: 06/29/2009

Print Date 07/07/2009

Stoddard solvent (Mineral Spirits) 8052-41-3
Titanium dioxide 13463-67-7
Calcium oxide 1305-78-8
Xylene 1330-20-7
Isophorone Diisocyanate 4098-71-9
Crystalline Silica (Quartz)/Silica Sand 14808-60-7

Penn RTK Components: Polyurethane Polymer
Butyl benzyl phthalate 85-68-7
Calcium Carbonate (Limestone) 1317-65-3
Polyvinyl chloride 9002-86-2
Stoddard solvent (Mineral Spirits) 8052-41-3
Titanium dioxide 13463-67-7
Calcium oxide 1305-78-8
Xylene 1330-20-7
Diisodecyl phthalate 26761-40-0

NJ RTK Components: Polyurethane Polymer
Butyl benzyl phthalate 85-68-7
Calcium Carbonate (Limestone) 1317-65-3
Polyvinyl chloride 9002-86-2
Stoddard solvent (Mineral Spirits) 8052-41-3
Titanium dioxide 13463-67-7
Calcium oxide 1305-78-8
Xylene 1330-20-7
Diisodecyl phthalate 26761-40-0

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

85-68-7
25761-40-0
100-41-4
68515-49-1
108-88-3
14808-60-7
Butyl benzyl phthalate
Diisodecyl phthalate
Ethylbenzene
Diisodecyl phthalate (mixed Is)
Toluene
Crystalline Silica (Quartz)/Silica Sand

SECTION 16 - OTHER INFORMATION

HMIS Rating:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

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.
Material Safety Data Sheet

SOLARGARD SEAM SEALER WHITE 5 GAL
Version 2
REVISION DATE: 06/29/2009

Print Date 07/07/2009

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

An RPM Company

8/8

1511700005P