

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : Ladlelock 90 PB All Winter Grades  
 CAS-No. : Mixture  
 Product code : 3093, 3511  
 Other means of identification : Alumina-Silicate Wet Chemically Bonded Mortar-Slurry

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Refractory  
 Recommended use : Industrial use

#### 1.3. Supplier

Resco Products, Inc.  
 One Robinson Plaza, Suite 300  
 6600 Steubenville Pike  
 Pittsburgh, PA 15205 - United States  
 412-494-4491

[SDS@RescoProducts.com](mailto:SDS@RescoProducts.com) - [WWW.RescoProducts.com](http://WWW.RescoProducts.com)

#### 1.4. Emergency telephone number

Emergency number : EMERGENCY ONLY (CHEMTREC) USA & Canada 1-800-424-9300  
 Outside USA & Canada +1 703-741-5970

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Skin corrosion/irritation Category 2 H315 Causes skin irritation  
 Serious eye damage/eye irritation Category 2B H320 Causes eye irritation  
 Carcinogenicity Category 1A H350 May cause cancer (After drying or heating, Inhalation)

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger  
 Hazard statements (GHS US) : H315 - Causes skin irritation  
 H319 - Causes serious eye irritation  
 H350 - May cause cancer (After drying or heating, Inhalation)  
 Precautionary statements (GHS US) : P202 - Do not handle until all safety precautions have been read and understood.  
 P280 - Wear eye protection, protective gloves, protective clothing.  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P332+P313 - If skin irritation occurs: Get medical advice/attention.  
 P337+P313 - If eye irritation persists: Get medical advice/attention.

#### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : Ethylene glycol is toxic to humans.

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name  | Product identifier   | %       | GHS US classification |
|---|----------------------|---------|-----------------------|
| aluminium oxide, non-fibrous                | (CAS-No.) 1344-28-1  | 50 – 75 | Not classified        |
| phosphoric acid, conc=75%, aqueous solution | (CAS-No.) 7664-38-2  | 5 – 10  | Skin Corr. 1B, H314   |
| quartz                                      | (CAS-No.) 14808-60-7 | 1 – 5   | Carc. 1A, H350        |
| ethylene glycol                             | (CAS-No.) 107-21-1   | 1 – 5   | Not classified        |

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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- First-aid measures after inhalation : Allow affected person to breathe fresh air. Allow the victim to rest.  
First-aid measures after skin contact : Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.  
First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects (acute and delayed)

- Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.  
Symptoms/effects after inhalation : After drying or heating. May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation.  
Symptoms/effects after skin contact : Causes skin irritation.  
Symptoms/effects after eye contact : Causes serious eye irritation.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.  
Unsuitable extinguishing media : No unsuitable extinguishing media known.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : Not flammable.

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : If spilled, may cause the floor to be slippery.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Stop release.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Plug the leak, cut off the supply.  
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with eyes. Avoid contact with skin.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in original container. Keep container closed when not in use.  
Incompatible products : Strong bases. Avoid contact with materials: such as sulfides and sulfites which could release toxic gases, mixing with strong bases because high heat of reaction can generate steam, and metals which could liberate hydrogen, a flammable gas.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

|  |   |
|--|---|
| <b>Ladlelock 90 PB All Winter Grades (Mixture)</b>             |   |
| No additional information available                            |   |
| <b>aluminium oxide, non-fibrous (1344-28-1)</b>                |   |
| <b>USA - ACGIH - Occupational Exposure Limits</b>              |   |
| ACGIH TWA (mg/m <sup>3</sup> )                                 | 1 mg/m <sup>3</sup> respirable dust                     |
| <b>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</b> |   |
| No additional information available                            |   |
| <b>ethylene glycol (107-21-1)</b>                              |   |
| <b>USA - ACGIH - Occupational Exposure Limits</b>              |   |
| ACGIH TWA (ppm)  | 25 ppm (Vapor fraction)                                 |
| ACGIH STEL (mg/m <sup>3</sup> )                                | 10 mg/m <sup>3</sup> (Inhalable fraction, Aerosol only) |
| ACGIH STEL (ppm)   | 50 ppm (Vapor fraction)                                 |

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| quartz (14808-60-7)                        |  |
|--|--|
| USA - ACGIH - Occupational Exposure Limits |  |
| ACGIH TWA (mg/m <sup>3</sup> )             | 0.025 mg/m <sup>3</sup> (Silica-Crystalline Quartz; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction) |
| USA - OSHA - Occupational Exposure Limits  |  |
| Local name                                 | Silica, crystalline quartz, respirable dust  |
| OSHA PEL (TWA) (mg/m <sup>3</sup> )        | 0.05 mg/m <sup>3</sup> respirable dust   |
| Remark (OSHA)                              | (3) See Table Z-3.   |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountain with clean water.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves.

#### Eye protection:

Chemical goggles or safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

After air drying or heating. Dust when sawing or tear out. Wear appropriate mask

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                                |
|---|--------------------------------|
| Physical state                                  | : Liquid                       |
| Appearance                                      | : Slurry.                      |
| Color   | : white                        |
| Odor  | : Acid Odor                    |
| Odor threshold                                  | : Not applicable               |
| pH  | : No data available            |
| Melting point                                   | : > 2500 °F                    |
| Freezing point                                  | : ≈ 32 °F Not applicable       |
| Boiling point                                   | : Not applicable               |
| Critical temperature                            | : Not applicable               |
| Critical pressure                               | : Not applicable               |
| Flash point                                     | : Not applicable               |
| Relative evaporation rate (butyl acetate=1)     | : Not applicable               |
| Relative evaporation rate (ether=1)             | : Not applicable               |
| Flammability (solid, gas)                       | : Non flammable.               |
| Vapor pressure                                  | : Not Applicable               |
| Vapor pressure at 50 °C                         | : Not Applicable               |
| Relative vapor density at 20 °C                 | : No data available            |
| Relative density                                | : ≈ 2.4                        |
| Solubility                                      | : Moderately soluble in water. |
| Partition coefficient n-octanol/water (Log Pow) | : No data available            |
| Auto-ignition temperature                       | : Not applicable               |
| Decomposition temperature                       | : No data available            |
| Viscosity, kinematic                            | : No data available            |
| Viscosity, dynamic                              | : Not Applicable               |
| Explosion limits                                | : Not applicable               |
| Explosive properties                            | : No data available            |
| Oxidizing properties                            | : No data available            |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Air Setting.

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### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong bases. Avoid contact with materials: such as sulfides and sulfites which could release toxic gases, mixing with strong bases because high heat of reaction can generate steam, and metals which could liberate hydrogen, a flammable gas.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### aluminium oxide, non-fibrous (1344-28-1)

|                       |   |
|-----------------------|---|
| LD50 oral rat         | > 15900 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral) |
| LC50 Inhalation - Rat | 7.6 mg/l air (Equivalent or similar to OECD 403, 1 h, Rat, Male, Experimental value, Inhalation (aerosol))  |

#### ethylene glycol (107-21-1)

|                       |   |
|-----------------------|---|
| LD50 oral rat         | 7712 mg/kg body weight (according to BASF-internal standards, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s)) |
| LC50 Inhalation - Rat | > 2.5 mg/l (6 h, Rat, Male / female, Experimental value, Inhalation (aerosol))  |

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes eye irritation.  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : May cause cancer (After drying or heating, Inhalation).

#### quartz (14808-60-7)

|   |   |
|---|---|
| IARC group  | 1 - Carcinogenic to humans  |
| Reproductive toxicity                               | : Not classified  |
| STOT-single exposure                                | : Not classified  |
| STOT-repeated exposure                              | : Not classified  |
| Aspiration hazard                                   | : Not classified  |
| Viscosity, kinematic                                | : No data available   |
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met.   |
| Symptoms/effects after inhalation                   | : After drying or heating. May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation. |
| Symptoms/effects after skin contact                 | : Causes skin irritation.   |
| Symptoms/effects after eye contact                  | : Causes serious eye irritation.  |

## SECTION 12: Ecological information

### 12.1. Toxicity

#### ethylene glycol (107-21-1)

|                |   |
|----------------|---|
| LC50 fish 1    | 40761 mg/l (96 h, Salmo gairdneri, Static system) |
| EC50 Daphnia 1 | > 10000 mg/l (24 h, Daphnia magna)                |

### 12.2. Persistence and degradability

#### Ladlelock 90 PB All Winter Grades (Mixture)

|                               |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

#### aluminium oxide, non-fibrous (1344-28-1)

|                               |                 |
|-------------------------------|-----------------|
| Persistence and degradability | Not applicable. |
| Chemical oxygen demand (COD)  | Not applicable  |
| ThOD                          | Not applicable  |

#### phosphoric acid, conc=75%, aqueous solution (7664-38-2)

|                               |                                   |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
|-------------------------------|-----------------------------------|

#### ethylene glycol (107-21-1)

|                                 |  |
|---------------------------------|--|
| Persistence and degradability   | Biodegradable in the soil. Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.47 g O <sub>2</sub> /g substance                         |
| Chemical oxygen demand (COD)    | 1.24 g O <sub>2</sub> /g substance                         |

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| <b>ethylene glycol (107-21-1)</b> |                                    |
|-----------------------------------|------------------------------------|
| ThOD                              | 1.29 g O <sub>2</sub> /g substance |
| BOD (% of ThOD)                   | 0.36                               |
| <b>quartz (14808-60-7)</b>        |                                    |
| Persistence and degradability     | Not applicable.                    |
| Biochemical oxygen demand (BOD)   | Not applicable                     |
| Chemical oxygen demand (COD)      | Not applicable                     |
| ThOD                              | Not applicable                     |

### 12.3. Bioaccumulative potential

| <b>Ladlelock 90 PB All Winter Grades (Mixture)</b>             |  |
|--|--|
| Bioaccumulative potential                                      | Not established.                               |
| <b>aluminium oxide, non-fibrous (1344-28-1)</b>                |  |
| Bioaccumulative potential                                      | No data available.                             |
| <b>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</b> |  |
| Bioaccumulative potential                                      | No test data of component(s) available.        |
| <b>ethylene glycol (107-21-1)</b>                              |  |
| BCF fish 1   | 10 (72 h, <i>Leuciscus idus</i> )              |
| BCF other aquatic organisms 1                                  | 0.21 – 0.6 ( <i>Procambarus sp.</i> , Chronic) |
| BCF other aquatic organisms 2                                  | 190 (24 h, Algae)                              |
| Partition coefficient n-octanol/water (Log Pow)                | -1.34 (Experimental value)                     |
| Bioaccumulative potential                                      | Not bioaccumulative.                           |
| <b>quartz (14808-60-7)</b>                                     |  |
| Bioaccumulative potential                                      | No data available.                             |

### 12.4. Mobility in soil

| <b>aluminium oxide, non-fibrous (1344-28-1)</b>                |  |
|--|--|
| Ecology - soil   | No data available.                                     |
| <b>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</b> |  |
| Ecology - soil   | Highly mobile in soil.                                 |
| <b>ethylene glycol (107-21-1)</b>                              |  |
| Surface tension  | 48 mN/m (20 °C)  |
| Ecology - soil   | No (test) data on mobility of the substance available. |

### 12.5. Other adverse effects

|                              |                                     |
|------------------------------|-------------------------------------|
| Effect on the global warming | None known                          |
| Other information            | : Avoid release to the environment. |

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

|  |   |
|--|---|
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials                  | : Avoid release to the environment.                                       |

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not regulated

### Transportation of Dangerous Goods

Not regulated

### Transport by sea

Not regulated

### Air transport

Not regulated

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Ladlelock 90 PB All Winter Grades (Mixture)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

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|   |  |
|---|--|
| <b>Ladlelock 90 PB All Winter Grades (Mixture)</b>                          |  |
| <b>aluminium oxide, non-fibrous (1344-28-1)</b>                             |  |
| Not subject to reporting requirements of the United States SARA Section 313 |  |
| Note  | Note: The section 313 chemical list contains "CAS # 1344-28-1 Aluminum Oxide (Fibrous forms)"; the Aluminum oxide contained in this product is non-fibrous, and thus is not a section 313 material. Only manufacturing, processing, or otherwise use of aluminum oxide in the fibrous form triggers reporting. |
| <b>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</b>              |  |
| Not subject to reporting requirements of the United States SARA Section 313 |  |
| CERCLA RQ   | 5000 lb  |
| <b>ethylene glycol (107-21-1)</b>   |  |
| Subject to reporting requirements of United States SARA Section 313         |  |
| EPA TSCA Regulatory Flag  | T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.   |
| CERCLA RQ   | 5000 lb  |
| Note  | This information must be included in all SDS's that are copied and distributed for this material.  |

### 15.2. International regulations

#### CANADA

|  |  |
|--|--|
| <b>aluminium oxide, non-fibrous (1344-28-1)</b>                |  |
| Listed on the Canadian DSL (Domestic Substances List)          |  |
| <b>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</b> |  |
| Listed on the Canadian DSL (Domestic Substances List)          |  |

#### EU-Regulations

No additional information available

#### National regulations

|  |  |
|--|--|
| <b>quartz (14808-60-7)</b>                                   |  |
| Listed on IARC (International Agency for Research on Cancer) |  |

### 15.3. US State regulations

|  |   |  |   |                                  |                                     |
|--|---|--|---|----------------------------------|-------------------------------------|
| <b>Ladlelock 90 PB All Winter Grades (Mixture)</b>     |   |  |   |                                  |                                     |
| U.S. - California - Proposition 65 - Other information |   | This product contains crystalline silica, a chemical known to the state of California to cause cancer. For more information go to <a href="http://WWW.P65Warnings.ca.gov">WWW.P65Warnings.ca.gov</a> |   |                                  |                                     |
| <b>ethylene glycol (107-21-1)</b>                      |   |  |   |                                  |                                     |
| U.S. - California - Proposition 65 - Other information |   | This product contains ethylene glycol a chemical known to the State of California to cause birth defects or other reproductive harm.   |   |                                  |                                     |
| <b>quartz (14808-60-7)</b>                             |   |  |   |                                  |                                     |
| U.S. - California - Proposition 65 - Carcinogens List  | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female  | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) | Maximum allowable dose level (MADL) |
| Yes  | No  | No   | No  |                                  |                                     |

| Component   | State or local regulations  |
|---|---|
| phosphoric acid, conc=75%, aqueous solution (7664-38-2) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List  |
| aluminium oxide, non-fibrous (1344-28-1)                | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |
| ethylene glycol (107-21-1)                              | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |
| Quartz (14808-60-7)                                     | U.S. - New Jersey - Right to Know Hazardous Substance List  |

### SECTION 16: Other information

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Revision date : 11/05/2020  
 Other information : Report language name. English. In the event of any conflict between English and other language versions, the English version shall prevail.

Full text of H-phrases:

|      |   |
|------|---|
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation                  |
| H320 | Causes eye irritation                   |
| H350 | May cause cancer                        |

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