

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Permanente Mortar
CAS-No. : Mixture
Product code : 7285

1.2. Other means of identification

Other means of identification : Basic Speciality

1.3. Recommended use of the chemical and restrictions on use

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

1.4. Supplier's details

RHI Magnesita
425 South Salem Church Road
York, PA, 17408
United States
T 717-792-3611
[Resco SDS.TDS@rhimagnesita.com](mailto:Resco.SDS.TDS@rhimagnesita.com) - WWW.RescoProducts.com

1.5. Emergency phone number

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

SECTION 2 Hazard 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 (Inhalation).
Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H315 - Causes skin irritation
H350 - May cause cancer (Inhalation).
Causes eye irritation
Precautionary statements (GHS US) : P280 - Wear Dust respirator, eye protection, protective gloves.
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 or attention.
P337+P313 - If eye irritation persists: Get medical advice or attention.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | GHS US classification |
|---------------------|---------------------|-----------|-----------------------|
| Magnesium Oxide | CAS-No.: 1309-48-4 | ≥ 80 | Not classified |
| Sodium Silicate Dry | CAS-No.: 1344-09-8 | 1 – 5 | Not classified |
| quartz | CAS-No.: 14808-60-7 | 0.1 – 0.5 | Carc. 1A, H350 |

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according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

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

SECTION 4 First aid measures

4.1. Description of necessary 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). |
| 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/effects, acute and delayed

| | |
|---|--|
| Potential Adverse human health effects and symptoms | : Danger of serious damage to health by prolonged exposure through inhalation. |
| Symptoms/effects after inhalation | : May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation. |
| Symptoms/effects after skin contact | : Causes skin irritation. |

4.3. Indication of immediate medical attention and special treatment needed, 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 | : Fight fire with normal precautions from a reasonable distance. 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

For non-emergency personnel

No additional information available

For emergency responders

| | |
|----------------------|--|
| Protective equipment | : Equip cleanup crew with proper protection. |
|----------------------|--|

6.2. Methods and materials for containment and cleaning up

| | |
|--|--|
| For containment | : Collect spillage. |
| Methods for cleaning up | : On land, sweep or shovel into suitable containers. |
| 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 incompatibilities

| | |
|-----------------------|---|
| Storage conditions | : Store this product in a dry location where it can be protected from the elements. |
| Incompatible products | : Strong bases. Strong acids. |

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Magnesium Oxide (1309-48-4)

USA - ACGIH - Occupational Exposure Limits

| | |
|-----------------|-------------------------------------|
| ACGIH® TLV® TWA | 10 mg/m ³ inhalable dust |
|-----------------|-------------------------------------|

USA - OSHA - Occupational Exposure Limits

| | |
|--------------|--------------------------------------|
| OSHA PEL TWA | 10 mg/m ³ respirable dust |
|--------------|--------------------------------------|

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quartz (14808-60-7)

USA - ACGIH - Occupational Exposure Limits

| | |
|-----------------|--|
| ACGIH® TLV® TWA | 0.025 mg/m ³ (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 | 0.05 mg/m ³ respirable dust |
| Remark (OSHA) | (3) See Table Z-3. |

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide adequate ventilation to minimize dust concentrations.

8.3. Individual protection measures, such as 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:

In case of insufficient ventilation, wear suitable respiratory equipment

Other information:

Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

| | |
|---|----------------------|
| Physical state | : Solid |
| Appearance | : Granular Mixture. |
| Color | : light brown |
| Odor | : slight Earthy odor |
| Odor threshold | : No data available |
| pH | : > 10 |
| pH solution concentration | : 10 % |
| Melting point | : > 2000 °F |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Flammability (solid, gas) | : Not flammable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20°C | : No data available |
| Relative density | : No data available |
| Solubility | : Slightly soluble. |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : No data available |
| Explosion limits | : No data available |
| Particle characteristics | : No data available |

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

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10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids. Strong bases.

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

Magnesium Oxide (1309-48-4)

| | |
|--------------------|---|
| LD50 oral rat | > 5000 mg/kg (Rat, Literature study, Oral) |
| LD50 dermal rabbit | > 2000 mg/kg body weight (Rabbit, Literature study, Dermal) |

Sodium Silicate Dry (1344-09-8)

| | |
|---------------------------|---------------------------------------|
| LD50 oral rat | > 2000 mg/kg (Rat, Oral) |
| Skin corrosion/irritation | : Causes skin irritation. pH: > 10 |

Magnesium Oxide (1309-48-4)

| | |
|----|-----------|
| pH | 11 (10 %) |
|----|-----------|

quartz (14808-60-7)

| | |
|----|-------|
| pH | 6 – 7 |
|----|-------|

Sodium Silicate Dry (1344-09-8)

| | |
|-------------------------------|--------------------------------------|
| pH | 11 – 13 |
| Serious eye damage/irritation | : Causes eye irritation. pH: > 10 |

Magnesium Oxide (1309-48-4)

| | |
|----|-----------|
| pH | 11 (10 %) |
|----|-----------|

quartz (14808-60-7)

| | |
|----|-------|
| pH | 6 – 7 |
|----|-------|

Sodium Silicate Dry (1344-09-8)

| | |
|-----------------------------------|----------------------------------|
| pH | 11 – 13 |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : May cause cancer (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 |

Magnesium Oxide (1309-48-4)

| | |
|---|--|
| Viscosity, kinematic | Not applicable (solid) |
| Potential Adverse human health effects and symptoms | : Danger of serious damage to health by prolonged exposure through inhalation. |
| Symptoms/effects after inhalation | : May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation. |
| Symptoms/effects after skin contact | : Causes skin irritation. |

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SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Sodium Silicate Dry (1344-09-8)

| | |
|----------------------|--|
| LC50 - Fish [1] | 210 mg/l (96 h, Brachydanio rerio, Pure substance) |
| EC50 - Crustacea [1] | 216 mg/l (96 h, Daphnia magna, Pure substance) |

12.2. Persistence and degradability

Permanente Mortar (Mixture)

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

Magnesium Oxide (1309-48-4)

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

quartz (14808-60-7)

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

Sodium Silicate Dry (1344-09-8)

| | |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |

12.3. Bioaccumulative potential

Permanente Mortar (Mixture)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

Magnesium Oxide (1309-48-4)

| | |
|---------------------------|------------------------------------|
| Bioaccumulative potential | No bioaccumulation data available. |
|---------------------------|------------------------------------|

quartz (14808-60-7)

| | |
|---------------------------|--------------------|
| Bioaccumulative potential | No data available. |
|---------------------------|--------------------|

Sodium Silicate Dry (1344-09-8)

| | |
|---------------------------|------------------------------------|
| Bioaccumulative potential | No bioaccumulation data available. |
|---------------------------|------------------------------------|

12.4. Mobility in soil

Magnesium Oxide (1309-48-4)

| | |
|-----------------|-------------------------------------|
| Surface tension | No data available in the literature |
| Ecology - soil | No data available. |

Sodium Silicate Dry (1344-09-8)

| | |
|----------------|---|
| Ecology - soil | No (test) data on mobility of the component(s) available. |
|----------------|---|

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12.5. Other adverse effects

| | |
|------------------------------|-------------------------------------|
| Ozone | : Not classified |
| Effect on the global warming | : None known |
| Fluorinated greenhouse gases | : No |
| Other information | : Avoid release to the environment. |

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

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. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Magnesium Oxide (1309-48-4)

Listed on the Canadian DSL (Domestic Substances List)

quartz (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List)

Sodium Silicate Dry (1344-09-8)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

quartz (14808-60-7)

Listed on IARC (International Agency for Research on Cancer)

15.3. State regulations

Permanente Mortar (Mixture)

| | |
|--|--|
| 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 WWW.P65Warnings.ca.gov |
|--|--|

quartz (14808-60-7)

| 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

| | |
|----------------------------|---|
| Magnesium Oxide(1309-48-4) | 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

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

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according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 5/21/2024
Issue date : 5/1/2015
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 hazard classes and H-statements | |
|--|------------------------|
| H315 | Causes skin irritation |
| H320 | Causes eye irritation |
| H350 | May cause cancer. |

Safety Data Sheet (SDS), USA

This information and recommendations set forth herein are taken from sources believed to be accurate as of the date herein, however, RHI Magnesita makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.