

### SECTION 1 Identification

#### 1.1. Product identifier

Product form : Mixture  
Product name : Permagon S-II  
CAS-No. : Mixture  
Product code : 1029

#### 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](http://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 quartz	CAS-No.: 1344-09-8	1 – 5	Not classified
	CAS-No.: 14808-60-7	0.1 – 0.5	Carc. 1A, H350

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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.
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	: Danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye burns.

#### 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.
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#### 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.
Emergency procedures	: Stop release.
Environmental precautions	: Do not discharge into drains.

#### 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	: Do not breathe dust. 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/m³ inhalable dust
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##### USA - OSHA - Occupational Exposure Limits

OSHA PEL TWA	10 mg/m³ respirable dust
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quartz (14808-60-7)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	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	0.05 mg/m <sup>3</sup> 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 inadequate ventilation wear respiratory protection.

#### 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	: 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	: 2.5 – 3.5
Solubility	: Moderately soluble in water.
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 of use.

### 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)
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Skin corrosion/irritation : Causes skin irritation.  
pH: > 10

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

pH	11 (10 %)
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#### quartz (14808-60-7)

pH	6 – 7
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#### Sodium Silicate Dry (1344-09-8)

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

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

pH	11 (10 %)
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#### quartz (14808-60-7)

pH	6 – 7
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#### Sodium Silicate Dry (1344-09-8)

pH	11 – 13
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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
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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)
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Potential Adverse human health effects and symptoms : Danger of serious damage to health by prolonged exposure through inhalation.  
Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation.  
Symptoms/effects after skin contact : Causes skin irritation.  
Symptoms/effects after eye contact : Causes serious eye burns.

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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

##### Permagon S-II (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

##### Permagon S-II (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.

#### 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

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**Air transport**  
Not regulated

### SECTION 15 Regulatory information

#### 15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Magnesium Oxide	1309-48-4	Present	Active	
quartz	14808-60-7	Present	Active	
Sodium Silicate Dry	1344-09-8	Present	Active	

#### 15.2. International regulations

##### CANADA

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

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

##### Permagun S-II (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](http://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 2024)

Revision date

: 6/3/2026

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.