

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Permagon S-II
CAS-No. : Mixture
Product code : 1029
Other means of identification : Basic Speciality

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
T 412-494-4491
SDS@RescoProducts.com - 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 (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
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/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

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	≥ 95	Not classified
Sodium Silicate Dry	CAS-No.: 1344-09-8	1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2B, H320
quartz	CAS-No.: 14808-60-7	0.1 – 0.5	Carc. 1A, H350

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

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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).
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 and 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. 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.
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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

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

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

6.2. Environmental precautions

Do not discharge into drains.

6.3. Methods and material for containment and cleaning up

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

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	: 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 any 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

Permagun S-II (Mixture)

No additional information available

Magnesium Oxide (1309-48-4)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	10 mg/m ³ inhalable dust
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Magnesium Oxide (1309-48-4)	
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) [1]	10 mg/m ³ respirable dust
Sodium Silicate Dry (1344-09-8)	
No additional information available	
quartz (14808-60-7)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL 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) [1]	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/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. Information on 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
Relative evaporation rate (butyl acetate=1)	: 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	: Not Applicable
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

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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

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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Sodium Silicate Dry (1344-09-8)

pH	11 – 13
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quartz (14808-60-7)

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

pH	11 – 13
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quartz (14808-60-7)

pH	6 – 7
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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

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Aspiration hazard : Not classified
Viscosity, kinematic : Not Applicable

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.

SECTION 12: Ecological information

12.1. Toxicity

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

Permagan 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

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

quartz (14808-60-7)	
Persistence and degradability	Not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

Permagan S-II (Mixture)	
Bioaccumulative potential	Not established.
Magnesium Oxide (1309-48-4)	
Bioaccumulative potential	No bioaccumulation data available.

Sodium Silicate Dry (1344-09-8)	
Bioaccumulative potential	No bioaccumulation data available.

quartz (14808-60-7)	
Bioaccumulative potential	No 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 data 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

In accordance with DOT / TDG / IMDG / IATA
Department of Transportation (DOT)
In accordance with DOT
Not regulated

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Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US 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)

EU-Regulations

No additional information available

National regulations

quartz (14808-60-7)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

Permagon 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
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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

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Revision date

: 5/21/2024

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

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, Resco Products, Inc. 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.