

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : Z-DOL
 CAS-No. : Mixture
 Product code : 5021
 Other means of identification : Dolomite Burned Brick

1.2. Recommended use and restrictions on use

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

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 1A H314 Causes severe skin burns and eye damage
 Carcinogenicity Category 1A H350 May cause cancer (Dust when sawing or tear out, 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) :

Hazard statements (GHS US) :

Precautionary statements (GHS US) :

: Danger
 H314 - Causes severe skin burns and eye damage
 H350 - May cause cancer (Dust when sawing or tear out, Inhalation)
 P202 - Do not handle until all safety precautions have been read and understood.
 P280 - Wear Safety shoes, eye protection, protective gloves, protective clothing.
 Avoid contact with the skin and the eyes
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 IF ON SKIN: Gently wash with plenty of soap and water.
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
 P260 - Do not breathe Dust when sawing or tear out.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : May release smoke when heated. Combustion products include carbon monoxide, carbon dioxide, and hydrocarbon vapors. Radioactivity: In common with many naturally occurring mineral products zirconia contains very low levels of naturally occurring radioactive elements, principally uranium, thorium and radium. The principal radiation hazard is due to inhalation of any dust, while a secondary lesser external hazard exists through gamma radiation.

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
calcium oxide	(CAS-No.) 1305-78-8	50 - 75	Skin Corr. 1A, H314
Magnesium Oxide	(CAS-No.) 1309-48-4	20 - 50	Not classified
Zirconia	(CAS-No.) 1314-23-4	1 - 5	Not classified
Wax, Bulk Liquid		1 - 5	Not classified
cristobalite	(CAS-No.) 14464-46-1	1 - 5	Carc. 1A, H350

Z-DOL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 : Get medical advice/attention if you feel unwell.
First-aid measures after inhalation : Dust when sawing or tear out. Remove the victim into fresh air.
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. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth.

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

- Symptoms/effects after skin contact : May cause moderate 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 : Carbon dioxide. Dry powder. Dry sand.
Unsuitable extinguishing media : Do not use extinguishing media containing water.

5.2. Specific hazards arising from the chemical

- Fire hazard : Reactions involving a fire hazard: see "Reactivity Hazard". Fire conditions may produce carbon dioxide-carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : When cooling/extinguishing: no water in the substance.
Protection during firefighting : Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Protective gloves. Safety glasses. Safety shoes. Protective clothing.
Emergency procedures : Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment.

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with eyes. Contact lenses should be removed.

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. Protect from moisture.
Incompatible products : Acids; reactive fluoridated, brominated, or phosphorous compounds; aluminum (may form hydrogen gas); reactive metals; organic acid anhydrides; nitro-organic compounds; interhalogenated compounds.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Magnesium Oxide (1309-48-4)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (Magnesium oxide; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction)
calcium oxide (1305-78-8)		
Not applicable		
cristobalite (14464-46-1)		
ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³ (Silica-Crystalline Cristobalite; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m ³)	0.05 mg/m ³ respirable dust

Z-DOL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Zirconia (1314-23-4)		
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ As Zr
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ As Zr

Wax, Bulk Liquid

Not applicable

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid in various shapes.
Color	: brown
Odor	: odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: > 2500 °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)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 2.8 - 2.9
Solubility	: Reacts with water to form Ca(OH) ₂ , Mg(OH) ₂ , and heat.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
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

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts exothermically with water (moisture). Reacts with water to form Ca(OH)₂, Mg(OH)₂, and heat. Reacts with acids to form calcium salts while generating heat.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Water, humidity.

10.5. Incompatible materials

Acids.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon monoxide. Carbon dioxide.

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

Z-DOL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Magnesium Oxide (1309-48-4)	
LD50 oral rat	> 5000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2000 mg/kg body weight (Rabbit; Literature study)
calcium oxide (1305-78-8)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value)
LD50 dermal rabbit	> 2500 mg/kg body weight (EU Method B.3: Acute toxicity (dermal), 24 h, Rabbit, Male/female, Experimental value)

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Eye damage, category 1, implicit
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer (Dust when sawing or tear out, Inhalation).

crystalite (14464-46-1)	
IARC group	1 - Carcinogenic to humans
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after skin contact	: May cause moderate irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Magnesium Oxide (1309-48-4)	
EC50 Daphnia 1	500-665,TLM; 96 h; Mysidacea
calcium oxide (1305-78-8)	
LC50 fish 1	>= 1070 mg/l (Equivalent or similar to OECD 203, 96 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
EC50 Daphnia 1	>= 159.6 mg/l (EPA OPP 72-2, 24 h, Crustacea, Static system, Fresh water, Experimental value)

12.2. Persistence and degradability

Magnesium Oxide (1309-48-4)	
Persistence and degradability	Biodegradability: not applicable. No (test) data on mobility of the substance available.
ThOD	Not applicable (inorganic)
calcium oxide (1305-78-8)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable (inorganic)
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
crystalite (14464-46-1)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

Magnesium Oxide (1309-48-4)	
Bioaccumulative potential	Bioaccumulation: not applicable.
calcium oxide (1305-78-8)	
Bioaccumulative potential	Not bioaccumulative.
crystalite (14464-46-1)	
Bioaccumulative potential	No test data available.

12.4. Mobility in soil

calcium oxide (1305-78-8)	
Ecology - soil	No (test) data on mobility of the substance available.

Z-DOL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

No additional information available

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

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

Wax, Bulk Liquid	CAS-No.	1 - 5%
------------------	---------	--------

15.2. International regulations

CANADA

No additional information available

calcium oxide (1305-78-8)

Listed on the Canadian DSL (Domestic Substances List)

crystalite (14464-46-1)

Listed on the Canadian DSL (Domestic Substances List)

Zirconia (1314-23-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

Z-DOL (Mixture)

U.S. - California - Proposition 65 - Other information	This product contains crystalline silica, a chemical known to the state of California to cause cancer.
--	--

crystalite (14464-46-1)

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. - New Jersey - Right to Know Hazardous Substance List
calcium oxide(1305-78-8)	U.S. - New Jersey - Right to Know Hazardous Substance List
crystalite(14464-46-1)	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

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 04/01/2019

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
H350	May cause cancer

SDS US (GHS HazCom 2012)

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.