

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : Sureflow 17E
 CAS-No. : Mixture
 Product code : 0359
 Other means of identification : Alumina-Silicate Cement Bonded Castable

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Refractory

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 - 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
 H320 - Causes eye irritation
 H350 - May cause cancer (Inhalation)
 Precautionary statements (GHS US) : P280 - Wear eye protection, Dust respirator, 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.
 P260 - Do not breathe dust.

2.3. Other hazards which do not result in classification

No additional information available

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 Aluminate Cement	(CAS-No.) 65997-16-2	20 - 50	Skin Irrit. 2, H315 Eye Irrit. 2B, H320
aluminium oxide, non-fibrous	(CAS-No.) 1344-28-1	10 - 20	Not classified
cristobalite	(CAS-No.) 14464-46-1	10 - 20	Carc. 1A, H350
quartz	(CAS-No.) 14808-60-7	1 - 5	Carc. 1A, H350

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 victim to breathe fresh air. Allow the victim to rest.
 First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing 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 : 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 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.
 Reactivity : Hydraulic setting.

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 : Do not breathe dust.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
 Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust.

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 handle until all safety precautions have been read and understood. Avoid raising dust. Avoid contact with skin and eyes. Do not breathe dust.
 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

Calcium Aluminate Cement (65997-16-2)		
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
aluminium oxide, non-fibrous (1344-28-1)		
Not applicable		
quartz (14808-60-7)		
ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³ (Silica-Crystalline Quartz; 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 fraction
OSHA	Remark (OSHA)	(3) See Table Z-3.

8.2. Appropriate engineering controls

No additional information available

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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:

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	: Solid
Appearance	: Granular mixture.
Color	: Light gray
Odor	: Earthy Odor
Odor threshold	: Not applicable
pH	: No data available
Melting point	: > 2500 °F
Freezing point	: 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	: ≈ 2.1
Solubility	: Slightly soluble.
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity	: Not Applicable
Viscosity, kinematic	: Not Applicable
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

Hydraulic setting.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Avoid dust formation.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

No additional information available

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : 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)
LC50 inhalation rat (mg/l)	7.6 mg/l air (Equivalent or similar to OECD 403, 1 h, Rat, Male, Experimental value)

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 (Inhalation).

crystalite (14464-46-1)	
IARC group	1 - Carcinogenic to humans

quartz (14808-60-7)	
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
 Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
 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.
 Symptoms/effects after eye contact : Causes eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

Sureflow 17E (Mixture)	
Persistence and degradability	Not established.

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

aluminium oxide, non-fibrous (1344-28-1)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable (inorganic)
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

quartz (14808-60-7)	
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

Sureflow 17E (Mixture)	
Bioaccumulative potential	Not established.

crystalite (14464-46-1)	
Bioaccumulative potential	No test data available.

aluminium oxide, non-fibrous (1344-28-1)	
Bioaccumulative potential	No bioaccumulation data available.

quartz (14808-60-7)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

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

Ecology - soil No (test) data on mobility of the substance available.

12.5. Other adverse effects

Effect on the global warming None known

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

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

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

Subject to reporting requirements of United States SARA Section 313

15.2. International regulations

CANADA

No additional information available

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

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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		

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		

crystalite (14464-46-1)

U.S. - New Jersey - Right to Know Hazardous Substance List

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

U.S. - New Jersey - Right to Know Hazardous Substance List

quartz (14808-60-7)

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

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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

SDS US (GHS HazCom 2012)

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