

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Kricon 34-5
CAS-No. : Mixture
Product code : 0959
Other means of identification : Alumina Cement Bonded Castable

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
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)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
aluminium oxide, non-fibrous	CAS-No.: 1344-28-1	75 – 95	Not classified
chromium(III) oxide	CAS-No.: 1308-38-9	5 – 10	Not classified
Calcium Aluminate Cement	CAS-No.: 65997-16-2	1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2B, H320
cristobalite	CAS-No.: 14464-46-1	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 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. Get medical advice/attention if you feel unwell. Do not induce vomiting.

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

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	: In case of fire, all extinguishing media allowed.

5.2. Specific hazards arising from the chemical

Fire hazard	: Non-flammable.
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5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: No specific fire-fighting instructions required.
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

Protective equipment	: Avoid creating or spreading dust.
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6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
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6.2. Environmental precautions

Prevent entry to sewers and public waters.

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

No additional information available

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 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

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No additional information available

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

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	1 mg/m ³ respirable dust
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Calcium Aluminate Cement (65997-16-2)

No additional information available

chromium(III) oxide (1308-38-9)

No additional information available

crystalite (14464-46-1)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	0.025 mg/m ³ respirable dust
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USA - OSHA - Occupational Exposure Limits

OSHA PEL (TWA) [1]	0.05 mg/m ³ respirable dust
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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:

Wear appropriate mask

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Granular mixture.
Color	: Green
Odor	: odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: > 3000 °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 – 3
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
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

Hydraulic setting.

10.2. Chemical stability

Stable under normal conditions.

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. Chromic oxide may react with alkali at high temperatures under oxidizing conditions.

10.6. Hazardous decomposition products

No additional information available

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

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, Oral, 14 day(s))

LC50 Inhalation - Rat > 2.3 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))

chromium(III) oxide (1308-38-9)

LD50 oral rat > 5000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))

LC50 Inhalation - Rat > 5.41 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))

Skin corrosion/irritation : Causes skin irritation.

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

pH 9 – 10.5 (aqueous suspension, 33 %)

Calcium Aluminate Cement (65997-16-2)

pH ≤ 13

chromium(III) oxide (1308-38-9)

pH No data available in the literature

crystalobalite (14464-46-1)

pH 6 – 7

Serious eye damage/irritation : Causes eye irritation.

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

pH 9 – 10.5 (aqueous suspension, 33 %)

Calcium Aluminate Cement (65997-16-2)

pH ≤ 13

chromium(III) oxide (1308-38-9)

pH No data available in the literature

crystalobalite (14464-46-1)

pH 6 – 7

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer (Inhalation).

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

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

Viscosity, kinematic Not applicable (solid)

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chromium(III) oxide (1308-38-9)	
Viscosity, kinematic	Not applicable (solid)
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

aluminium oxide, non-fibrous (1344-28-1)	
LC50 - Fish [1]	> 100 mg/l (96 h, Salmo trutta, Literature study)
EC50 - Crustacea [1]	> 100 mg/l (48 h, Daphnia magna, Literature study)
chromium(III) oxide (1308-38-9)	
LC50 - Fish [1]	> 10000 mg/l (ISO 7346-1, 96 h, Danio rerio, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

aluminium oxide, non-fibrous (1344-28-1)	
Persistence and degradability	Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
chromium(III) oxide (1308-38-9)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

crystalite (14464-46-1)	
Persistence and degradability	Mineral. Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

aluminium oxide, non-fibrous (1344-28-1)	
Bioaccumulative potential	No data available.
chromium(III) oxide (1308-38-9)	
Bioaccumulative potential	Not bioaccumulative.
crystalite (14464-46-1)	
Bioaccumulative potential	No data available.

12.4. Mobility in soil

aluminium oxide, non-fibrous (1344-28-1)	
Surface tension	No data available in the literature
Ecology - soil	No data available.
chromium(III) oxide (1308-38-9)	
Surface tension	No data available in the literature
Ecology - soil	Adsorbs into the soil.
crystalite (14464-46-1)	
Ecology - soil	No data available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations	: Do not discharge into the sewer.
Additional information	: Chromite (Cr ⁺³) may in normal use be converted chemically to a chromate (Cr ⁺⁶). Hexavalent chromium (Cr ⁺⁶) is considered a hazardous material.

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

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Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Kricon 34-5 (Mixture)

Note This information must be included in all SDS's that are copied and distributed for this material.

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

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

Not subject to reporting requirements of the United States SARA Section 313

Note Note: The section 313 chemical list contains "CAS # 1344-28-1 Aluminum Oxide (Fibrous forms)"; the Aluminum oxide contained in this product is non-fibrous, and thus is not a section 313 material. Only manufacturing, processing, or otherwise use of aluminum oxide in the fibrous form triggers reporting.

chromium(III) oxide (1308-38-9)

Subject to reporting requirements of United States SARA Section 313

15.2. International regulations

CANADA

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

Listed on the Canadian DSL (Domestic Substances List)

Calcium Aluminate Cement (65997-16-2)

Listed on the Canadian DSL (Domestic Substances List)

chromium(III) oxide (1308-38-9)

Listed on the Canadian DSL (Domestic Substances List)

cristobalite (14464-46-1)

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

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U.S. - California - Proposition 65 - Other information This product contains chromite (Cr⁺³) which may in normal use, be converted chemically to a chromate (Cr⁺⁶) hexavalent chrome, a chemical known to the State of California to cause cancer. 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

cristobalite (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

aluminium oxide, non-fibrous (1344-28-1)	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
chromium(III) oxide (1308-38-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List
Cristobalite (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

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Revision date : 4/26/2023

Other information : Report language name. English. In the event of any conflict between English and other language versions, the English version shall prevail.

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Full text of H-phrases	
H315	Causes skin irritation
H320	Causes eye irritation
H350	May cause cancer

Safety Data Sheet (SDS), USA

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