



Resco LR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 3/21/2023 Revision date: 3/21/2023 Supersedes: 6/1/2021

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Resco LR
CAS-No. : Mixture
Product code : 0280
Other means of identification : Plastic/Ramming Mix Refractory

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	After drying 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 - After drying 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	50 – 75	Not classified
phosphoric acid, conc=75%, aqueous solution	CAS-No.: 7664-38-2	5 – 10	Skin Corr. 1B, H314
aluminium sulphate	CAS-No.: 10043-01-3	1 – 5	Skin Corr. 1A, H314
quartz	CAS-No.: 14808-60-7	0.5 – 1	Carc. 1A, H350
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	: 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	: After drying or heating. 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	: Not flammable.
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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	: Avoid contact with skin and eyes.
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6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: On land, sweep or shovel into suitable containers.

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.
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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 contact with skin and eyes. After drying 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.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Resco LR (Mixture)

No additional information available

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crystalite (14464-46-1)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	0.025 mg/m ³ respirable dust
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) [1]	0.05 mg/m ³ respirable dust
aluminium oxide, non-fibrous (1344-28-1)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	1 mg/m ³ respirable dust
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
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.
aluminium sulphate (10043-01-3)	
No additional information available	
8.2. Appropriate engineering controls	
Appropriate engineering controls	: Emergency eye wash fountain with clean water.
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:	
Dust when sawing or tear out. 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	: Plastic.
Color	: Off-white Light gray
Odor	: earthy
Odor threshold	: No data available
pH	: < 3
Melting point	: > 2000 °F
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available

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Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: ≈ 2.8
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	: 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

SECTION 10: Stability and reactivity

10.1. Reactivity

Air Setting.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

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))

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

ATE US (oral)	4400 mg/kg body weight
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aluminium sulphate (10043-01-3)

LD50 oral rat	2000 – 5000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Hydrate form, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Hydrate form, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Aqueous solution, Inhalation (aerosol), 14 day(s))

Skin corrosion/irritation : Causes skin irritation.
pH: < 3

cristobalite (14464-46-1)

pH	6 – 7
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aluminium oxide, non-fibrous (1344-28-1)	
pH	9 – 10.5 (aqueous suspension, 33 %)
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
pH	0 – 0.5 (20 °C)
quartz (14808-60-7)	
pH	6 – 7
aluminium sulphate (10043-01-3)	
pH	No data available in the literature
Serious eye damage/irritation	: Causes eye irritation. pH: < 3
crystalite (14464-46-1)	
pH	6 – 7
aluminium oxide, non-fibrous (1344-28-1)	
pH	9 – 10.5 (aqueous suspension, 33 %)
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
pH	0 – 0.5 (20 °C)
quartz (14808-60-7)	
pH	6 – 7
aluminium sulphate (10043-01-3)	
pH	No data available in the literature
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: After drying May cause cancer (Inhalation).
quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: Not Applicable
aluminium oxide, non-fibrous (1344-28-1)	
Viscosity, kinematic	Not applicable (solid)
aluminium sulphate (10043-01-3)	
Viscosity, kinematic	Not applicable (solid)
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: After drying or heating. 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)

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aluminium sulphate (10043-01-3)	
LC50 - Fish [1]	> 87.5 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, Aluminium)
EC50 - Crustacea [1]	> 200 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	14 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
12.2. Persistence and degradability	
Resco LR (Mixture)	
Persistence and degradability	Not established.
crystalite (14464-46-1)	
Persistence and degradability	Mineral. Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
aluminium oxide, non-fibrous (1344-28-1)	
Persistence and degradability	Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Persistence and degradability	Biodegradability: 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
aluminium sulphate (10043-01-3)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
12.3. Bioaccumulative potential	
Resco LR (Mixture)	
Bioaccumulative potential	Not established.
crystalite (14464-46-1)	
Bioaccumulative potential	No data available.
aluminium oxide, non-fibrous (1344-28-1)	
Bioaccumulative potential	No data available.
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Bioaccumulative potential	No test data of component(s) available.
quartz (14808-60-7)	
Bioaccumulative potential	No data available.

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aluminium sulphate (10043-01-3)	
Bioaccumulative potential	No bioaccumulation data available.
12.4. Mobility in soil	
crystalite (14464-46-1)	
Ecology - soil	No data available.
aluminium oxide, non-fibrous (1344-28-1)	
Surface tension	No data available in the literature
Ecology - soil	No data available.
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Ecology - soil	Highly mobile in soil.
aluminium sulphate (10043-01-3)	
Surface tension	73 mN/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Ecology - soil	No (test) data on mobility of the substance available.
12.5. Other adverse effects	
Effect on the global warming	: None known
Other information	: No other effects 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	
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	
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	
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.
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb
aluminium sulphate (10043-01-3)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb
15.2. International regulations	
CANADA	
crystalite (14464-46-1)	
Listed on the Canadian DSL (Domestic Substances List)	

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

Listed on the Canadian DSL (Domestic Substances List)

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

Listed on the Canadian DSL (Domestic Substances List)

aluminium sulphate (10043-01-3)

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

Resco LR (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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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		

Component

State or local regulations

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
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
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	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
aluminium sulphate (10043-01-3)	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 : 3/21/2023

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
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.