



# Mighty Fibre M-310

## Safety Data Sheet

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

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### SECTION 1: Identification

#### 1.1. Identification

Product form : Article  
Product name : Mighty Fibre M-310  
Product code : 9944  
Synonyms : Pre-Cast Refractory Shape

#### 1.2. Recommended use and restrictions on use

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

#### 1.3. Supplier

##### Manufacturer

Resco Products, Inc.  
One Robinson Plaza, Suite 300  
6600 Steubenville Pike  
Pittsburgh, PA 15205 - United States  
412-494-4491

[SDS@RescoProducts.com](mailto:SDS@RescoProducts.com) - [WWW.RescoProducts.com](http://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

Not classified

#### 2.2. GHS Label elements, including precautionary statements

This product meets the definition and criteria for an article according to OSHA 29 CFR 1910.1200 and the EU REACH 1907/2006 Article 3(3) regulations.

Other hazards not contributing to the classification : Pre-cast shape may be heavy and cause pinch and drop hazards, use of gloves and safety shoes should be considered. . Note: This product contains metallic fiber, hand protection required.

#### 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
aluminium oxide, non-fibrous	(CAS-No.) 1344-28-1	20 – 50	Not classified
310 Stainless Steel Fibre		20 – 50	Not classified
Calcium Aluminate Cement	(CAS-No.) 65997-16-2	5 – 10	Skin Irrit. 2, H315 Eye Irrit. 2B, H320
silicon carbide	(CAS-No.) 409-21-2	1 – 5	Carc. 1B, H350
cristobalite	(CAS-No.) 14464-46-1	0.1 – 0.5	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 : No hazards which require special first aid measures.  
First-aid measures after inhalation : Inhalation unlikely. Allow affected person to breathe fresh air.  
First-aid measures after skin contact : Not applicable.  
First-aid measures after eye contact : Direct eye contact is unlikely. Rinse cautiously with water for several minutes.  
First-aid measures after ingestion : Ingestion unlikely. Rinse mouth.

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

Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation.  
Symptoms/effects after eye contact : Eye irritation.  
Symptoms/effects after ingestion : No data available.

#### 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 : Non-flammable.

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### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : No specific fire-fighting instructions required.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety shoes.

#### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

### 6.2. Environmental precautions

No additional information available

### 6.3. Methods and material for containment and cleaning up

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 : 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.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Mighty Fibre M-310</b>	
No additional information available	
<b>aluminium oxide, non-fibrous (1344-28-1)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> respirable dust
<b>Calcium Aluminate Cement (65997-16-2)</b>	
No additional information available	
<b>crystalite (14464-46-1)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> respirable dust
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> respirable dust
<b>silicon carbide (409-21-2)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (Silicon carbide, nonfibrous; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica.
<b>310 Stainless Steel Fibre</b>	
No additional information available	

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Dust when sawing or tear out; Provide adequate ventilation to minimize dust concentrations.

### 8.3. Individual protection measures/Personal protective equipment

**Hand protection:**  
protective gloves

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid  
Appearance : Shape.  
Color : Gray  
Odor : None  
Odor threshold : No data available  
pH : No data available  
Melting point : > 3000 °F  
Freezing point : No data available  
Boiling point : No data available

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Flash point	: No data available
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	: ≈ 2.6
Solubility	: Insoluble 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	: 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

None known.

### 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

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)
LC50 Inhalation - Rat	7.6 mg/l air (Equivalent or similar to OECD 403, 1 h, Rat, Male, Experimental value, Inhalation (aerosol))

#### silicon carbide (409-21-2)

LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

#### silicon carbide (409-21-2)

IARC group	2A - Probably carcinogenic to humans
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: No data available.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 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
cristobalite (14464-46-1)	
Persistence and degradability	Mineral. Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
silicon carbide (409-21-2)	
Persistence and degradability	Biodegradability: 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.
cristobalite (14464-46-1)	
Bioaccumulative potential	No data available.
silicon carbide (409-21-2)	
Bioaccumulative potential	Bioaccumulation: not applicable.

#### 12.4. Mobility in soil

aluminium oxide, non-fibrous (1344-28-1)	
Ecology - soil	No data available.
cristobalite (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 : Dispose in a safe manner in accordance with local/national regulations.

### 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

##### Mighty Fibre M-310

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:

310 Stainless Steel Fibre	CAS-No.	20 – 50%
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### 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.

### 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)

### crystalite (14464-46-1)

Listed on the Canadian DSL (Domestic Substances List)

### silicon carbide (409-21-2)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

### National regulations

### silicon carbide (409-21-2)

Listed on IARC (International Agency for Research on Cancer)

### 15.3. US State regulations

#### Mighty Fibre M-310

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

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

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

silicon carbide (409-21-2)

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)

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.