

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : GR-FG 100
 CAS No : Mixture
 Product code : 5359 Mix3806
 Other means of identification : Magnesia-Chrome Brick

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

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Warning
 Hazard statements (GHS-US) : H320 - Causes eye irritation
 H315 - Causes skin irritation
 H335 - May cause respiratory irritation
 Precautionary statements (GHS-US) : P260 - Do not breathe Dust when sawing or tear out.
 P280 - Wear Safety shoes, protective gloves, eye protection.

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
Magnesium Oxide	(CAS No) 1309-48-4	50 - 75	Not classified
chromium(III) oxide	(CAS No) 1308-38-9	10 - 20	Not classified
iron(III) oxide	(CAS No) 1309-37-1	10 - 20	Not classified
aluminium oxide, non-fibrous	(CAS No) 1344-28-1	5 - 10	Not classified

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.
 First-aid measures after inhalation : 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.
 First-aid measures after ingestion : Rinse mouth with water. Do NOT induce vomiting. Get medical advice/attention.

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

No additional information 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.

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Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Specific hazards arising from the chemical

Fire hazard : Non-flammable.
Reactivity : Fire conditions may produce small amounts of hexavalent chromium and other oxidation products.

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 : Safety shoes. Gloves. Safety glasses.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Carefully collect the spill/leftovers.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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 in a dry place.
Incompatible products : Strong acids.

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

Not applicable

iron(III) oxide (1309-37-1)

ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (Iron oxide (Fe ₂ O ₃); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)
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aluminium oxide, non-fibrous (1344-28-1)

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 : Shape.
Color : Dark
Odor : None
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) : Not flammable.
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : 2.8 - 3.3

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Solubility	: Insoluble in 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

Fire conditions may produce small amounts of hexavalent chromium and other oxidation products.

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 : Not classified

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)

chromium(III) oxide (1308-38-9)	
LD50 oral rat	> 15000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value)
LC50 inhalation rat (mg/l)	> 5.41 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Experimental value)

iron(III) oxide (1309-37-1)	
LD50 oral rat	> 5000 mg/kg (Rat; Literature study)

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

iron(III) oxide (1309-37-1)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Magnesium Oxide (1309-48-4)	
EC50 Daphnia 1	500-665, TLM; 96 h; Mysidacea

chromium(III) oxide (1308-38-9)	
LC50 fish 1	> 2.9 µg/l (ISO 7346-1, 96 h, Danio rerio, Static system, Fresh water, Experimental value)

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iron(III) oxide (1309-37-1)	
LC50 fish 1	> 1000 mg/l (LC50; 48 h)

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)

chromium(III) oxide (1308-38-9)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable (inorganic)
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

iron(III) oxide (1309-37-1)	
Persistence and degradability	Biodegradability: not applicable. Adsorbs into the soil.
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)

12.3. Bioaccumulative potential

Magnesium Oxide (1309-48-4)	
Bioaccumulative potential	Bioaccumulation: not applicable.

chromium(III) oxide (1308-38-9)	
BCF fish 1	260 - 800 (Lepomis macrochirus, Fresh water, Read-across, Fresh weight)
BCF other aquatic organisms 1	116 (Crassostrea sp., Chrome)
BCF other aquatic organisms 2	86 (Mytilus edulis, Chrome)
Bioaccumulative potential	Potential for bioaccumulation ($500 \leq \text{BCF} \leq 5000$).

iron(III) oxide (1309-37-1)	
Bioaccumulative potential	No bioaccumulation data available.

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

12.4. Mobility in soil

chromium(III) oxide (1308-38-9)	
Surface tension	Not applicable (solid)
Ecology - soil	Adsorbs into the soil.

aluminium oxide, non-fibrous (1344-28-1)	
Ecology - soil	No (test) data on mobility of the substance available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : 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

Department of Transportation (DOT)

In accordance with DOT

Not regulated

TDG

Not regulated

Transport by sea

Not regulated

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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

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

Listed on the Canadian DSL (Domestic Substances List)

iron(III) oxide (1309-37-1)

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

GR-FG 100 (Mixture)

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.

Magnesium Oxide (1309-48-4)

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

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

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

iron(III) oxide (1309-37-1)

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

SECTION 16: Other information

Revision date : 12/20/2017

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

SDS US (GHS HazCom 2012)

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