



GR-FG

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 of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : GR-FG
CAS No : Mixture
Product code : 5364 Mix3805
Other means of identification : Magnesite-Chrome Brick

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Refractory

1.3. Details of the supplier of the safety data sheet

Resco Products, Inc.
Penn Center West
Building 2, Suite 430
Pittsburgh, PA 15276 - United States
412-494-4491
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: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

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

Other hazards not contributing to the classification : Radioactivity: In common with many naturally occurring mineral products, zircon contains very low levels of naturally occurring radioactive elements - principally uranium, thorium, and radium. The principal radiation hazard is due to inhalation of any dust, while a secondary lesser external hazard exists through gamma radiation. Zircon typically exhibits a total specific activity of 90-110 pCi/g.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

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
Chrome Ore	(CAS No) 1308-31-2	1 - 5	Not classified
zircon	(CAS No) 1490-68-2	1 - 5	Not classified

Full text of H-phrases: 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.

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- 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, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

- 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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

GR-FG (Mixture)		
ACGIH	Not applicable	
OSHA	Not applicable	
Magnesium Oxide (1309-48-4)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
OSHA	Not applicable	
chromium(III) oxide (1308-38-9)		
ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³
OSHA	Not applicable	
iron(III) oxide (1309-37-1)		
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
OSHA	Not applicable	
aluminium oxide, non-fibrous (1344-28-1)		
ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
OSHA	Not applicable	
Chrome Ore (1308-31-2)		
ACGIH	ACGIH TWA (mg/m ³)	0.05 mg/m ³

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Chrome Ore (1308-31-2)		
OSHA	Not applicable	
zircon (1490-68-2)		
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ As Zr
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ As Zr

8.2. Exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Shape.
Colour	: Dark
Odour	: None
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: > 2500 °F
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 3.2
Solubility	: Water: None
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 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 bodyweight (Rabbit; Literature study)

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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	> 10000 mg/kg (Rat; Experimental value)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

chromium(III) oxide (1308-38-9)	
IARC group	3 - Not classifiable

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

Chrome Ore (1308-31-2)	
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

chromium(III) oxide (1308-38-9)	
LC50 fishes 1	> 0.0029 mg/l (96 h; Brachydanio rerio; Measured concentration)
LC50 fish 2	>= 10000 mg/l (96 h; Brachydanio rerio; Nominal concentration)
TLM fish 1	> 1000 mg/l (Leuciscus idus; Nominal concentration)
iron(III) oxide (1309-37-1)	
LC50 fishes 1	> 1000 mg/l (48 h; Leuciscus idus; Nominal concentration)
aluminium oxide, non-fibrous (1344-28-1)	
Threshold limit algae 1	> 100 mg/l (72 h; Selenastrum capricornutum; GLP)

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: not applicable. Forming sediments in water. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

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
BOD (% of ThOD)	Not applicable

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

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Chrome Ore (1308-31-2)	
Persistence and degradability	Biodegradability in water: no data available.

zircon (1490-68-2)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

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

chromium(III) oxide (1308-38-9)	
BCF other aquatic organisms 1	116 (Crassostrea sp.; Chrome)
BCF other aquatic organisms 2	86 (Mytilus edulis; Chrome)
Bioaccumulative potential	Bioaccumable.

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.

Chrome Ore (1308-31-2)	
Bioaccumulative potential	No bioaccumulation data available.

zircon (1490-68-2)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer :
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste 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

In accordance with DOT
Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

GR-FG (Mixture)	
WHMIS Classification	D2B

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

15.3. US State regulations

GR-FG(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.

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SECTION 16: Other information

SDS US (GHS HazCom 2012)

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