

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 8/25/2016 Revision date: 4/22/2025 Supersedes: 5/20/2022

## **SECTION 1: Identification**

#### 1.1. Identification

Product form : Mixture
Product name : Krilex 621-2-C
CAS-No. : Mixture
Product code : 1715

Other means of identification : Magnesia-Chrome Brick

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

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

## 1.3. Supplier

RHI Magnesita

One Robinson Plaza, Suite 300

6600 Steubenville Pike Pittsburgh, PA, 15205 United States T 412-494-4491

Resco\_SDS.TDS@rhimagnesita.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

Specific target organ toxicity – Single exposure, Category 3, H335 May cause respiratory irritation

Respiratory tract irritation

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) : Warning

Hazard statements (GHS US) : Dust from sawing or tear out may irritate eye.

H315 - Causes skin irritation H320 - Causes eye irritation

H335 - May cause respiratory irritation

Precautionary statements (GHS US) : P260 - Do not breathe Dust when sawing or tear out.

P280 - Wear protective gloves, eye protection, Safety shoes.

### 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
Magnesium Oxide	CAS-No.: 1309-48-4	50 – 75	Not classified
Transvaal Chrome Ore	CAS-No.: 1308-31-2	10 – 20	Not classified
chromium(III) oxide	CAS-No.: 1308-38-9	10 – 20	Not classified
iron(III) oxide	CAS-No.: 1309-37-1	5 – 10	Not classified
aluminium oxide, non-fibrous	CAS-No.: 1344-28-1	1 – 5	Not classified

Full text of hazard classes and H-statements : see section 16

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#### **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)

Symptoms/effects after inhalation : Cough.

## 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 : Not flammable.

Reactivity in case of fire : 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

IVIayi	lesiuiii	Oxide	(130	J-40-4)	
		_	4.8		0.00

**USA - ACGIH - Occupational Exposure Limits** 

ACGIH OEL TWA 10 mg/m³ inhalable dust

**USA - OSHA - Occupational Exposure Limits** 

OSHA PEL TWA 10 mg/m³ respirable dust

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

**USA - ACGIH - Occupational Exposure Limits** 

ACGIH OEL TWA 0.003 mg/m³ (Inhalable fraction)

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

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA 5 mg/m³ (Respirable fraction)

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aluminium oxide, non-fibrous (1344-28-1)		
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA	1 mg/m³ respirable dust	
Transvaal Chrome Ore (1308-31-2)		
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA 0.05 mg/m³ inhalable dust		
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## 8.2. Appropriate engineering controls

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

No data available

## 8.3. Individual protection measures/Personal protective equipment

## Personal protective equipment:

Avoid all unnecessary exposure.

## Hand protection:

Wear protective gloves.

#### Eye protection:

Odor threshold

Chemical goggles or safety glasses

#### Skin and body protection:

Safety shoes. Wear suitable protective clothing

#### Respiratory protection:

Dust when sawing or tear out. Wear appropriate mask

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Shape.
Color : Dark
Odor : None

Ha No data available Melting point > 2500 °F No data available Freezing point Boiling point No data available No data available Flash point Relative evaporation rate (butyl acetate=1) No data available Flammability (solid, gas) No data available Vapor pressure No data available Relative vapor density at 20°C No data available

Relative density 2.8 - 3.3Solubility Insoluble in water. Partition coefficient n-octanol/water (Log Pow) No data available Auto-ignition temperature No data available No data available Decomposition temperature 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

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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	Met desc'f ed		
	Not classified Not classified		
	Not classified		
Magnesium Oxide (1309-48-4)			
LD50 oral rat	> 5000 mg/kg (Rat, Literature study, Oral)		
LD50 dermal rabbit	> 2000 mg/kg body weight (Rabbit, Literature study, Dermal)		
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 (dust), 14 day(s))		
iron(III) oxide (1309-37-1)			
LD50 oral rat	> 10000 mg/kg body weight (Rat, Male, Experimental value, Oral)		
LC50 Inhalation - Rat	5.05 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))		
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))		
Skin corrosion/irritation :	Causes skin irritation.		
Magnesium Oxide (1309-48-4)			
рН	11 (10 %)		
chromium(III) oxide (1308-38-9)			
рН	No data available in the literature		
iron(III) oxide (1309-37-1)			
pH	7 (5 %)		
aluminium oxide, non-fibrous (1344-28-1)	7 (5 %)		
	7 (5 %) 9 – 10.5 (aqueous suspension, 33 %)		
aluminium oxide, non-fibrous (1344-28-1) pH			
aluminium oxide, non-fibrous (1344-28-1) pH	9 – 10.5 (aqueous suspension, 33 %)		
aluminium oxide, non-fibrous (1344-28-1) pH Serious eye damage/irritation :	9 – 10.5 (aqueous suspension, 33 %)		
aluminium oxide, non-fibrous (1344-28-1) pH Serious eye damage/irritation :  Magnesium Oxide (1309-48-4)	9 – 10.5 (aqueous suspension, 33 %) Causes eye irritation.		
aluminium oxide, non-fibrous (1344-28-1) pH Serious eye damage/irritation :  Magnesium Oxide (1309-48-4) pH	9 – 10.5 (aqueous suspension, 33 %) Causes eye irritation.		
aluminium oxide, non-fibrous (1344-28-1) pH Serious eye damage/irritation :  Magnesium Oxide (1309-48-4) pH  chromium(III) oxide (1308-38-9)	9 – 10.5 (aqueous suspension, 33 %) Causes eye irritation.  11 (10 %)		
aluminium oxide, non-fibrous (1344-28-1) pH Serious eye damage/irritation :  Magnesium Oxide (1309-48-4) pH  chromium(III) oxide (1308-38-9) pH	9 – 10.5 (aqueous suspension, 33 %)  Causes eye irritation.  11 (10 %)		
aluminium oxide, non-fibrous (1344-28-1) pH Serious eye damage/irritation :  Magnesium Oxide (1309-48-4) pH  chromium(III) oxide (1308-38-9) pH  iron(III) oxide (1309-37-1)	9 – 10.5 (aqueous suspension, 33 %) Causes eye irritation.  11 (10 %)  No data available in the literature		
aluminium oxide, non-fibrous (1344-28-1) pH Serious eye damage/irritation :  Magnesium Oxide (1309-48-4) pH  chromium(III) oxide (1308-38-9) pH  iron(III) oxide (1309-37-1) pH	9 – 10.5 (aqueous suspension, 33 %) Causes eye irritation.  11 (10 %)  No data available in the literature		

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Chemical oxygen demand (COD)

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Germ cell mutagenicity : Carcinogenicity : Reproductive toxicity : STOT-single exposure : STOT-repeated exposure : Aspiration hazard :	Not classified Not classified Not classified Not classified Not classified May cause respiratory irritation. Not classified Not classified Not classified No data available		
, ,	Net applicable (calid)		
Viscosity, kinematic	Not applicable (solid)		
chromium(III) oxide (1308-38-9)	Net analizable (selid)		
Viscosity, kinematic	Not applicable (solid)		
iron(III) oxide (1309-37-1)			
Viscosity, kinematic	Not applicable (solid)		
aluminium oxide, non-fibrous (1344-28-1)			
Viscosity, kinematic	Not applicable (solid)		
	Cough.		
SECTION 12: Ecological information			
12.1. Toxicity			
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)		
EC50 - Crustacea [1]	14 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)		
iron(III) oxide (1309-37-1)			
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)		
aluminium oxide, non-fibrous (1344-28-1)	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)		
12.2. Persistence and degradability			
Krilex 621-2-C (Mixture)			
Persistence and degradability	Rapidly degradable		
Magnesium Oxide (1309-48-4)			
Persistence and degradability	Not applicable.		
Chemical oxygen demand (COD)	Not applicable		
ThOD	Not applicable		
chromium(III) oxide (1308-38-9)			
Persistence and degradability	Biodegradability: not applicable.		
Chemical oxygen demand (COD)	Not applicable (inorganic)		
ThOD	Not applicable (inorganic)		
iron(III) oxide (1309-37-1)			
Persistence and degradability	Biodegradability: not applicable.		

Not applicable (inorganic)

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iron(III) oxide (1309-37-1)		
ThOD	Not applicable (inorganic)	
aluminium oxide, non-fibrous (1344-28-1)		
Persistence and degradability	Not applicable.	
Chemical oxygen demand (COD)	Not applicable	
ThOD	Not applicable	
Transvaal Chrome Ore (1308-31-2)		
Persistence and degradability	Not established.	
Chemical oxygen demand (COD)	Not applicable	
ThOD	Not applicable	
12.3. Bioaccumulative potential		
Magnesium Oxide (1309-48-4)		
Bioaccumulative potential	No bioaccumulation data available.	
chromium(III) oxide (1308-38-9)		
Bioaccumulative potential	Not bioaccumulative.	
iron(III) oxide (1309-37-1)		
Bioaccumulative potential	Not bioaccumulative.	
aluminium oxide, non-fibrous (1344-28-1)		
Bioaccumulative potential	No data available.	
Transvaal Chrome Ore (1308-31-2)		
Bioaccumulative potential	No data available.	
12.4. Mobility in soil		
Magnesium Oxide (1309-48-4)		
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.	
iron(III) oxide (1309-37-1)		
Surface tension	Not applicable (solid)	
Ecology - soil	Adsorbs into the soil.	
aluminium oxide, non-fibrous (1344-28-1)		
Surface tension	Not applicable (water solubility < 1 mg/l)	
Ecology - soil	No data available.	
Transvaal Chrome Ore (1308-31-2)		
Ecology - soil	No data available.	
12.5. Other adverse effects		
No additional information available		

No additional information available

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## **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**

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

## Krilex 621-2-C (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, except for:

Transvaal Chrome Ore CAS-No. 1308-31-2 10 – 20%

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

Subject to reporting requirements of United States SARA Section 313

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

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

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

## Magnesium Oxide (1309-48-4)

Listed on the Canadian DSL (Domestic Substances List)

## 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)

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

Listed on the Canadian DSL (Domestic Substances List)

#### Transvaal Chrome Ore (1308-31-2)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

#### **EU-Regulations**

No additional information available

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#### **National regulations**

No additional information available

## Krilex 621-2-C (Mixture)

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

# Transvaal Chrome Ore (1308-31-2) 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.

Component	State or local regulations
Magnesium Oxide (1309-48-4)	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
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 Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List
Transvaal Chrome Ore (1308-31-2)	U.S Massachusetts - Right To Know List; 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 hazard classes and H-statements	
H315	Causes skin irritation
H320	Causes eye irritation
H335	May cause respiratory irritation

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, RHI Magnesita, 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.

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