

## 1 Identification of the substance/mixture/product and of the company

### Product identifier

Brand Code 8747

Trade name: **ANKERFRIT 041**

Application of the substance / the mixture: Refractory product

### Details of the supplier of the safety data sheet

Manufacturer/Supplier: RHI Canada Inc.  
4355 Fairview Street  
Burlington, Ontario L7L 2A4  
Canada  
Tel 905-639-8660

Information department: MSDS Technical Information  
Mail: msds@rhi-ag.com

Emergency telephone number: Tel: +43 699 1870 5426  
Fax: +43 502 13 5364

## 2 Hazard(s) identification

Information concerning particular hazards for human and environment: not applicable  
Hazard pictograms



GHS05

Signal word: Danger

Hazard-determining components of labeling: calcium oxide  
Hazard statements: H318 Causes serious eye damage.

Precautionary statements: P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor

### Classification system

#### NFPA ratings (scale 0-4)



Health = 1  
Fire = 0  
Reactivity = 0

#### HMIS Classification



Health = 1  
Fire = 0  
Reactivity = 0

Carcinogenicity: not listed  
Other hazards

See section 11.

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## 3 Composition/information on ingredients

### Chemical characterization: Mixtures

**Description:** Unshaped product for refractory use on basis of

#### Dangerous components:

1309-48-4	magnesium oxide		60-100%
1305-78-8	calcium oxide	Xi R41 Eye Dam. 1, H318	5-7%
8012-95-1	Paraffin oils		0.1-1%

#### Additional information

The product contains lime in different bound forms (calcium ferrite, calcium silicate, etc.) or immobilized as the magnesia raw material. The lime is not present in the free form and is therefore not classified as dangerous.

## 4 First-aid measures

### Description of first aid measures

**After inhalation** Supply fresh air; consult doctor in case of complaints.  
**After skin contact** Immediately wash with water and soap and rinse thoroughly.  
**After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.  
**After swallowing** If symptoms persist consult doctor.  
**Information for doctor / Note to physicians**  
**Most important symptoms and effects, both acute and delayed:** No further relevant information available.  
**Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

## 5 Fire-fighting measures

### Extinguishing media

**For safety reasons unsuitable extinguishing agents** Not applicable, the product is fire resistant.

**Special hazards arising from the substance or mixture** No further relevant information available.

### Advice for firefighters

**Protective equipment / Protection of firefighters:** No special measures required.

**Hazardous combustion products** Will not occur.

**Flammable properties** The product is fire resistant.  
Not flammable.

**Additional information:** Additional information see section 9.

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8.

**Environmental precautions:** See section 12.

**Methods and material for containment and cleaning up:** Ensure adequate ventilation.

**Reference to other sections** See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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## 7 Handling and storage

### Handling

**Precautions for safe handling** Prevent formation of dust.

**Information about protection**

**against explosions and fires:** The product is not flammable.

### Conditions for safe storage, including any incompatibilities

#### Storage

**Requirements to be met  
by storerooms and**

**receptacles:**

No special requirements.

**Information about storage  
in one common storage**

**facility:**

Not applicable.

**Further information about  
storage conditions:**

Keep receptacle tightly sealed.

**Specific end use(s)**

No further relevant information available.

## 8 Exposure controls/personal protection

### Additional information about

**design of technical systems:**

No further data; see item 7.

### Control parameters

#### Exposure Guidelines (Components with limit values that require monitoring at the workplace):

##### 1309-48-4 magnesium oxide

PEL Long-term value: 15\* mg/m<sup>3</sup>  
fume; \*total particulate

TLV Long-term value: 10\* mg/m<sup>3</sup>  
\*as inhalable fraction

##### 1305-78-8 calcium oxide

PEL Long-term value: 5 mg/m<sup>3</sup>

REL Long-term value: 2 mg/m<sup>3</sup>

TLV Long-term value: 2 mg/m<sup>3</sup>

##### 8012-95-1 Paraffin oils

PEL Long-term value: 5 mg/m<sup>3</sup>

REL Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
oil mist

TLV L

**Additional information:** The lists that were valid during the creation were used as basis.

### Exposure controls

#### Personal protective equipment (PPE)

**General protective and  
hygienic measures**

Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

**Respiratory protection /  
Breathing equipment:**

NIOSH approved respirators should be used if dust is present. A respiratory protection program should be implemented if exposure exceeds OSHA PELs.

**Respiratory protection**



Filter P100

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Protection of hands:

Leather gloves  
Protective gloves

Eye/face protection:

Safety glasses with side shields

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Safety glasses

Skin protection:

Protective work clothing.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form (Physical state):

Solid

Color:

Dark

Odor:

Odorless

Odor threshold:

Not determined.

pH-value:

Not applicable.

Melting point / Melting range:

2802 °C (5076 °F)

Flash point:

Not applicable.

Flammability (solid, gaseous)

Product is not flammable.  
See section 5.

Ignition temperature:

Not applicable.

Decomposition temperature:

Not applicable.

Auto igniting:

Product is not self igniting.

Danger of explosion:

Product does not present an explosion hazard.

#### Explosion limits:

Lower:

Not applicable.

Upper:

Not applicable.

Vapor pressure:

Not applicable.

Relative density

Not applicable.

Vapour density

Not applicable.

Evaporation rate

Not applicable.

Solubility in / Miscibility with

Not applicable.

Water:

Insoluble.

Partition coefficient (n-octanol/water): Not applicable.

Viscosity:

Not applicable.

dynamic:

Not applicable.

kinematic:

Not applicable.

Other information

No further relevant information available.

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## Additional information

Melting Point: NA  
 Freezing Point: NA  
 Viscosity (and units): NA  
 Odor Threshold (ppm): NA  
 Evaporation Rate (relative to): NA  
 Vapor Density (air =1): NA  
 Vapor Pressure (units): NA  
 pH (undiluted): NA  
 pH (diluted): NA  
 % dilution: NA  
 VOC Content: NA  
 % Volatile: NA  
 PM Content: NA

## 10 Stability and reactivity

### Reactivity

#### Chemical stability

#### Conditions to avoid

(Thermal decomposition): No decomposition if used and stored according to specifications.

#### Possibility of hazardous reactions

No dangerous reactions known

#### Conditions to avoid

No further relevant information available.

#### Hazardous decomposition products:

No dangerous decomposition products known

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

#### LD/LC50 values that are

relevant for classification: Not applicable.

#### Primary irritant effect:

##### on the skin:

Irritant to skin and mucous membranes.  
May cause dryness and irritation

##### on the eye:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

#### Allergic reaction:

No known allergic reaction.

#### Additional toxicological information:

Irritant

If this product has been in service at temperatures greater than 1000°C (1800°F) it may contain cristobalite, a form of crystalline silica.  
 IARC has classified crystalline silica, which includes cristobalite, as a group I carcinogen (known human carcinogen).

### Carcinogenic categories

#### IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

#### NTP (National Toxicology Program)

None of the ingredients is listed.

#### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

## 12 Ecological information

### Toxicity

#### Aquatic toxicity:

No further relevant information available.

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**Persistence and degradability** No further relevant information available.

**Behavior in environmental systems:**

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

**Additional ecological information:**

**General notes:** Do not allow large quantities of undiluted product to reach ground water, water course or sewage system.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

## 13 Disposal considerations

**Waste treatment methods**

**Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

**UN-Number**

DOT, ADR, ADN, IMDG, IATA not applicable

**UN proper shipping name**

DOT, ADR, ADN, IMDG, IATA not applicable

**Transport hazard class(es)**

DOT, ADR, ADN, IMDG, IATA  
Class not applicable

**Packing group**

DOT, ADR, IMDG, IATA not applicable

**Environmental hazards:**

Not applicable.

**Special precautions for user**

Not applicable.

**Danger code (Kemler):**

Not applicable.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**Transport/Additional information:**

Not dangerous according to available informations.

**UN "Model Regulation":**

-

## 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**WHMIS**

D2B - Toxic material causing other toxic effects

**Carcinogenicity categories**
**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**TLV (Threshold Limit Value established by ACGIH)**

1309-48-4 magnesium oxide

A4

**MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**


GHS05

**Signal word**

Danger

**Hazard-determining components of labeling:**

calcium oxide

**Hazard statements**

H318 Causes serious eye damage.

**Precautionary statements**

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a poison center/doctor

**National regulations:**
**SARA 313 TOXIC CHEMICALS**

No material listed in the components in Section 3 of this MSDS is on the SARA 313 list.

**SARA 302 EXTREMELY HAZARDOUS SUBSTANCES**

No material listed in the components in Section 3 of this MSDS is on the SARA 302 list.

**TSCA (Toxic Substances Control Act)**

This substance or all the ingredients of this product are on the Chemical Substances Inventory of the Toxic Substances Control Act (TSCA Inventory). The presence on this list does not require any legal reporting

**HMIS Classification**

Class D - Division 2 - Subdivision B

Untested mixture containing a toxic material

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all information required by the CPR.

**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing SDS:**

RHI AG Technology Center  
Chemistry Department  
Austria  
Phone: +43 502 13 5426

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**Abbreviations and acronyms:**

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

**\* Data compared to the previous version altered.**

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