

CMS INDUSTRIES  
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PREPARED BY: Manager of Quality Assurance  
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### SECTION 1 – Identification of the substance or mixture and of the supplier

#### 1.1 Product Identifier

Product Form: Mixture  
Product name: HEAT CAST 40  
CAS Number: Mixture  
Common name: Refractory Concrete

#### 1.2 Recommended use and restrictions on use

Use of the mixture: Refractory

#### 1.3 Supplier's details

CMS Industries  
P.O. Box 60 Orchard Park, NY, 14127  
Phone Number: (716)667-2231

#### 1.4 Emergency phone number

Josiah Goetz: 301-264-3595 x. 101  
301-707-9511 (after hours, weekends and Holidays)

### SECTION 2 – Hazards Identification

#### 2.1 Classification of the substance/mixture

GHS-US classification

Skin Irritant 2	H315
Eye Irritant 2B	H320
Carcinogen 1A	H350

See Section 16 for the full text of the H-phrases.

#### 2.2 Label elements, including precautionary statements

GHS-US labelling

Hazard Symbols (GHS-US)



Signal word (GHS-US)

DANGER

Hazard statements (GHS-US)

H315 – Causes skin irritation  
H320 – Causes eye irritation  
H350 – May cause cancer (inhalation)

Precautionary statements (GHS-US)

P280 – Wear eye protection, respirator, and protective gloves  
P305/P351/P338 – If in eyes: Rinse carefully with water for several minutes. If wearing contact lenses, remove if easy to do and continue to rinse.  
P332/P313 – If irritation of skin occurs: seek medical attention.

P337/P313 – If irritation of the eyes occurs: seek medical attention.

P260 – Do not breathe dust.

### 2.3 Other Hazards

No additional information available

## SECTION 3 – Composition/Information on ingredients

### 3.1 Substance

Not Applicable

### 3.2 Mixture

<b>INGREDIENT</b>	<b>CAS NO.</b>	<b>WEIGHT%</b>	<b>OSHA/PEL</b>	<b>ACGIH TLV</b>	<b>CARCINOGEN</b>
Crystalline Silica as below					NTP – Yes IARC–Group 1
Cristobalite	14464-46-1	0 – 5	0.05 mg/M <sup>3</sup> (resp)	0.025 mg/M <sup>3</sup> (resp)	
Quartz	14808-60-7	5 - 15	0.1 mg/M <sup>3</sup> (resp)	0.025 mg/M <sup>3</sup> (resp)	
Tridymite	15468-32-3	not detected	0.05 mg/M <sup>3</sup> (resp)	0.025 mg/M <sup>3</sup> (resp)	
Calcium Aluminate Cement					NO
	65997-16-2	10 - 30	5 mg/M <sup>3</sup> (resp) 15 mg/M <sup>3</sup> (total)	3 mg/M <sup>3</sup> (resp)	

## SECTION 4 – First Aid Measures

### 4.1 Description of First Aid measures

**EYE CONTACT:** Immediately flush eyes with water or eyewash solution, if wearing contact lenses, remove if easy to do so. If irritation continues, seek medical attention.

**SKIN CONTACT:** Immediately wash with soap and water, if irritation continues, seek medical attention.

**INHALATION:** Move victim to fresh air, seek immediate medical attention.

**INGESTION:** Do not induce vomiting, seek immediate medical attention.

### 4.2 Most important symptoms/effects, acute and delayed

**EYE CONTACT:** Causes eye irritation

**SKIN CONTACT:** Causes skin irritation

**INHALATION:** May cause cancer, danger of serious damage to health by prolonged exposure

### 4.3 Indication of immediate medical attention and special treatment needed

No additional information available

## SECTION 5 – Fire-fighting Measures

### 5.1 Suitable/unsuitable extinguishing media

**Suitable:** Use extinguishing media appropriate for surrounding fire

**Unsuitable:** No additional information available

### 5.2 Specific hazards arising from the mixture

**Fire hazard:** Not flammable, no applicable flash point

**Reactivity:** Hydraulic Setting

## 5.3 Special protective equipment and precautions for firefighters

Protection: Wear appropriate firefighting protective gear for surrounding fire.

Precautions: Hardened concrete which has not been properly dried/mixed is subject to explosion upon rapid heating due to internal steam pressure/spalling.

**SECTION 6 – Accidental Release Measures**

## 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Do not breathe dust.

Protective equipment: Equip cleanup crew with proper protective equipment.

Emergency procedures: Ventilate the area of accidental release.

## 6.2 Environmental precautions

Prevent entry into sewers, storm drains, and public waters.

## 6.3 Methods and material for containment and cleaning up

If there is an accidental release of this product during handling, all released product should be gently swept or vacuumed into a sealed container. All personnel engaged in cleanup of the release should adhere to the personal protection guidelines outlined in Section 8. Wastes should be disposed of according to the disposal guidelines outlined in Section 13.

**SECTION 7 – Handling and Storage**

## 7.1 Precautions for safe handling

Minimize dust generation and avoid contact and inhalation of product. Proper protective clothing, approved respiratory protection, safety glasses, and impervious gloves and boots should be worn to minimize exposure. Wash skin and clothing with soap and water after exposure/contact with material.

## 7.2 Conditions for safe storage, including any incompatibilities

To ensure product quality, store product in a dry location protected from the elements. Ensure shrink-wrap on pallet is kept intact until installation.

This mixture is incompatible with strong bases and strong acids.

**SECTION 8 – Exposure Controls/Personal Protection Equipment (PPE)**

## 8.1 Control parameters

Heat Cast 40(Mixture)

ACGIH: Not applicable

OSHA: Not applicable

Cristobalite(14464-46-1)

ACGIH: 0.025 mg/M<sup>3</sup> (resp)

OSHA: 0.05 mg/M<sup>3</sup> (resp)

Quartz(14808-60-7)

ACGIH: 0.025 mg/M<sup>3</sup> (resp)

OSHA: 0.1 mg/M<sup>3</sup> (resp)

Tridymite(15468-32-3)

ACGIH: 0.025 mg/M<sup>3</sup> (resp)

OSHA: 0.05 mg/M<sup>3</sup> (resp)

Calcium Aluminate Cement (65997-16-2)

ACGIH: 3 mg/M<sup>3</sup> (resp)

OSHA: 5 mg/M<sup>3</sup> (resp)

## 8.2 Appropriate engineering controls

Engineering Controls: Local and Mechanical Ventilation, OSHA STD 29 CFR 1910.94

## 8.3 Individual protection measures, such as PPE

**RESPIRATORY PROTECTION:** Ventilation should be provided when dust is created in conjunction with the use of product. If used material is being removed, it should be wetted down to reduce dust creation. When dust is present, during installation or removal, personnel should use respiratory protection, in compliance with OSHA STD 29 CFR 1910.134.

**EYE PROTECTION:** Safety glasses or goggles, as required by individual situation.

**PROTECTIVE GLOVES:** Protective gloves to limit exposure/direct skin contact.

**OTHER PPE:** Protective clothing to limit exposure/direct skin contact and any other PPE as required to meet applicable OSHA standards.

## SECTION 9 – Physical and chemical properties

### 9.1 Information on physical and chemical properties

Appearance: Granular solid, brown to buff color

Odour: No distinct odor

Odour Threshold: Not applicable

PH: Slightly Basic

Melting Point: >2000°F

Freezing Point: Not applicable

Boiling Point: Not applicable

Flash Point: Not applicable

Evaporation Rate: Not applicable

Flammability (solid, gas): None

Explosive limits: Not applicable

Vapour pressure: Not applicable

Vapour density: Not applicable

Relative Density: 2.0 – 3.0 (H<sub>2</sub>O = 1)

Solubility: Negligible

Log Pow: No data available

Log Kow: No data available

Viscosity, kinematic: Not applicable

Viscosity, dynamic: Not applicable

Auto-ignition temp.: No data available

Decomposition temp.: No data available

## 9.2 Other information

No additional information available

**SECTION 10 – Stability and Reactivity**

- 10.1 Chemical stability  
Stable
- 10.2 Reactivity  
Hydraulic Setting
- 10.3 Possibility of hazardous reactions  
No data available
- 10.4 Conditions to avoid  
Avoid dust formation
- 10.5 Incompatible materials  
None
- 10.6 Hazardous decomposition products  
No data available

**SECTION 11 – Toxicological Information**

## 11.1 Information on toxicological effects

SHORT TERM TOXICITY: Exposure to material may cause irritation/discomfort to the eyes, skin, nose, throat or lungs, and may aggravate existing respiratory conditions.

LONG TERM TOXICITY: Exposure to material may cause silicosis (lung disease) and possibly lung cancer.

**SECTION 12 – Ecological Information**

## 12.1 Toxicity

This product is composed primarily of earth minerals and is not expected to have an ecotoxic effect other than that associated with the lime in the cement.

## 12.2 Persistence and degradability

Not applicable

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Other adverse effects

No known ecological damage caused by this product, however avoid release into the environment.

**SECTION 13 – Disposal Considerations**

## 13.1 Waste disposal methods

Dispose in accordance with federal, state and local regulations. EPA (40 CFR 261 and 262)

**SECTION 14 – Transport Information**

## 14.1 Transport information

DOT (49 CFR 172.101): Not Regulated

UN/NA (49 CFR 172.101): Not Applicable

**SECTION 15 – Regulatory Information**

## 15.1 Safety, health, and environmental regulations specific for the mixture

Canadian WHMIS – D2A

SARA 313 – not subject to reporting

OSHA 29 CFR 1910.1200 – considered hazardous

SARA Hazard Category – “Chronic Health Hazard”

EPCRA Section 302 (Extremely Hazardous Substances) – not listed

California Prop. 65 – “Contains crystalline silica an ingredient known to cause cancer.”

CERCLA Section 304 (Title III) – not subject to reporting

**SECTION 16 – Other Information**

## 16.1 Other information

Full text of H-phrases:

Carcinogen 1A:	Carcinogenicity, Category 1A
Eye Irritation 2B:	Serious eye damage/irritation, Category 2B
Skin Irritation 2:	Skin corrosion/irritation, category 2
H315:	Causes skin irritation
H320:	Causes eye irritation
H350:	May cause cancer

This information is given in good faith. Suitability of the product for the application and installation conditions are critical to the safety of the product. These conditions are subject to the control of the user and all risks of use of the product are assumed by the user. For guidance on use in specific applications consult CMS INDUSTRIES.