

Printing date 09/01/1999

Reviewed on 08/26/1999

**1 Identification of substance**

Product details

Trade name: GM DRYBOND

**Manufacturer/Supplier:**  
North American Refractories Company  
500 Halle Building  
1228 Euclid Avenue  
Cleveland, Ohio 44115-1809

**Information department:**  
North American Refractories Technical Center - 814-234-7981

**2 Composition/Data on components**

Chemical characterization

Description:

Mixture of the substances listed below with nonhazardous additions.

Components

1302-93-8 alumina silicate	30-60 %
14464-46-1 crystalline silica (cristobalite)	20-30 %
1332-58-7 hydrous alumina silicate	10-20 %
10043-01-3 aluminum sulphate	5-10 %
14808-60-7 crystalline silica (quartz)	5-10 %

**3 Hazards identification**

Hazard description: Toxic

Medical conditions aggravated by exposure to the product:

Asthma, chronic lung disease, and skin irritation.

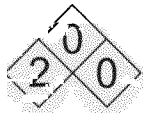
Information pertaining to particular dangers for man and environment:

May cause cancer by inhalation.

Risk of serious damage to eyes.

Danger of serious damage to lungs and respiratory tract by prolonged exposure.

NFPA ratings (scale 0-4)



Health = 2  
Fire = 0  
Reactivity = 0

**HMIS Classification**

Health: 2

Flammability: 0

Reactivity: 0

**4 First aid measures**

After inhalation: Move to fresh air; consult doctor if needed.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

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- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
This product is intended for industrial applications; in the unlikely event that this product is swallowed, consult a physician if any adverse medical conditions occur.

**5 Fire fighting measures**

**Suitable extinguishing agents:**  
Use fire fighting measures that suit the environment.  
**Protective equipment:** No special measures required.

**6 Accidental release measures**

**Person-related safety precautions:** Not required.  
**Measures for environmental protection:** No special measures required.  
**Measures for cleaning/collecting:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

**7 Handling and storage**

- **Handling:**
- **Information for safe handling:**  
Ensure good ventilation/exhaust at the workplace.  
Prevent formation of dust.
- **Information about protection against explosions and fires:**  
Keep respiratory protective device available.
- **Storage:**
- **Requirements to be met by storerooms and containers:**  
No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Store product inside, out of extreme weather conditions.
- **Storage class:**
- **Class according to regulation on flammable liquids:** Not applicable

**8 Exposure controls and personal protection**

**Components with limit values that require monitoring at the workplace:**

14464-46-1 crystalline silica (cristobalite)  
ACGIH TLV: 0.05 mg/m3  
NIOSH REL: 0.05\* mg/m3  
                  \*Respirable dust  
OSHA PEL: Short-term value: 10 mg/m3 / 2(%SiO2+2)\* mg/m3  
                  Long-term value: 30 mg/m3 / 2(%SiO2+2)\*\* mg/m3  
                  \*Respirable      \*\*Total dust

1332-58-7 hydrous alumina silicate  
ACGIH TLV: 10 mg/m3  
NIOSH REL: 10\*; 5\*\* mg/m3  
                  \*Total dust \*\*Respirable  
OSHA PEL: 15\*; 5\*\* mg/m3  
                  \*Total dust, \*\*Respirable

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10043-01-3 aluminum sulphate  
ACGIH TLV: Short-term value: 2 mg/m3  
as Al  
NIOSH REL: Short-term value: 2 mg/m3  
as Al

14808-60-7 crystalline silica (quartz)  
ACGIH TLV: 0.1 mg/m3  
NIOSH REL: 0.05\* mg/m3  
\*Respirable dust  
OSHA PEL: Short-term value: 10 mg/m3\* / (%SiO2+2) mg/m3, 250 mppcf\* /  
(% SiO2+5) ppm  
Long-term value: 30 mg/m3\*\* / (% SiO2+2) mg/m3  
\*Respirable \*\*Total dust

- Personal protective equipment:
- General protective and hygienic measures:  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes.
- Breathing equipment:



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

- Protection of hands:



Protective gloves recommended

- Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- Form: Solid
- Color: According to product specification
- Odor: No specific odor.
- Change in condition
- Melting point/Melting range: Undetermined.
- Boiling point/Boiling range: Undetermined.
- Flash point: Not applicable.
- Auto igniting: Product is not selfigniting.
- Danger of explosion:  
Product does not present an  
explosion hazard.
- Density: Not determined.

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Solubility in / Miscibility with  
Water: Insoluble

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous products of decomposition:**  
Refractories containing crystalline silica may, after service, contain more or less crystalline silica. Care must be taken to avoid and/or control dust from demolition. If in doubt of the proper protection, seek advice from a safety professional.

**11 Toxicological information**

- **Acute toxicity:**
- **Primary acute effects:**
- **Skin contact:** No irritant effect.
- **Eye contact:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant.  
Carcinogenic if inhaled.

**12 Ecological information**

General notes At present there are no ecotoxicological assessments.

**13 Disposal considerations**

**Recommendation for Disposal of Product:**  
As sold, this product is not RCRA hazardous. Final used condition must be evaluated prior to disposal. Dispose of waste product in accordance with Federal, State and Local regulations.  
Dust created during demolition of used product may contain crystalline silica.

**Recommendation for Disposal of Uncleaned Packaging:**  
Reuse, recycle or treat as industrial waste.

**14 Transport information**

**Transport/Additional information:**  
Not dangerous according to available information.

**15 Regulations**

**SARA 313**

No material listed in the components in Section 2 of this MSDS is on the SARA 313 list. If the manufacturer listed in Section 1 is not North American Refractories Company or VRD Canada, see manufacturer's MSDS.

**SARA 355 EXTREMELY HAZARDOUS CHEMICALS**

No material listed in the components in Section 2 of this MSDS is on  
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the SARA 355 list. If the manufacturer listed in Section 1 is not North American Refractories Company or VRD Canada, see manufacturer's MSDS.

• **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.

• **WHMIS Classification**

Class A - Division 2 - Sub Division A  
Untested mixture containing a very toxic material

Class D - Division 2 - Sub Division B  
Untested mixture containing a toxic material

Class D - Division 2 - Sub Division A  
Untested mixture containing a very toxic material

Hazard symbols: Toxic

**Hazard-determining components of labeling:**

crystalline silica (cristobalite)

crystalline silica (quartz)

• **Risk phrases:**

May cause cancer by inhalation.

Risk of serious damage to eyes.

Danger of serious damage to lungs and respiratory tract by prolonged exposure.

• **Safety phrases:**

Avoid exposure - obtain special instructions before use.

When using do not eat or drink.

Do not breathe dust.

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

After contact with skin, wash immediately with plenty of soap and water

Wear suitable protective clothing and gloves.

In case of accident or if you feel unwell, seek medical advice immediately.

**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 MSDS:**

North American Refractories Co. Technical Center

**Contact:**

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