

# MATERIAL SAFETY DATA SHEET



## FOR Normal Weight Concrete Masonry

Effective Date: August 2001

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### 1. PRODUCT/COMPANY IDENTIFICATION

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**Manufacturer's Name & Address:**

Titan America LLC  
1151 Azalea Garden Rd.  
Norfolk, VA 23502

**Trade Name:**

Normal Weight Concrete Masonry

**Chemical Name and Synonyms**

Aggregate (limestone (calcium carbonate), siliceous and calcareous gravels, etc.)\*

**Department of Transportation Identification No.:**

None

**Telephone Number for Information:**

**1.800.468.7622**

**Emergency Telephone:**

**1.757.858.6500**

\*Composition varies naturally, typically contains crystalline silica

### 2. COMPOSITION INFORMATION

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**MAJOR COMPOUNDS**

<u>Chemical Name</u>	<u>CAS Registry Number</u>	<u>% in this cement product</u>
Aggregate (limestone (calcium carbonate), siliceous sand calcareous gravels, etc.)* * Contains crystalline silica	Mixture  (Limestone 1317-65-3) 14808-60-7	55-95  > 0.1
Amorphous silica	7631-86-9	< 30
Alumina	1344-28-1	4-9
Portland Cement	65997-15-1	5
Iron oxide	1309-37-1	< 2

### 3. PHYSICAL/CHEMICAL CHARACTERISTICS

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Boiling Point	N/A
Specific Gravity (H2O = 1)	N/A
Vapor Pressure (mm Hg)	N/A
Melting Point	N/A
Vapor Density (AIR-1)	N/A
Evaporation Rate	N/A
Solubility in Water	Not soluble
Appearance & Odor	Odorless solid

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## 4. FIRE AND EXPLOSION HAZARD DATA

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Flash Point	N/A
Extinguishing Media	N/A
Special Fire Fighting Procedures	None
Unusual Fire & Explosion Hazards:	None
Flammable Limits	N/A
LEL	N/A
UEL	N/A

## 5. REACTIVITY DATA

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<b>Stability:</b>	Stable.
<b>Incompatibility:</b>	None known.
<b>Hazardous Decomposition or Byproducts:</b>	Respirable dust particles may be generated when concrete masonry is sawed or ground.
<b>Hazardous Polymerization:</b>	Will not occur. No conditions to avoid.

## 6. HEALTH HAZARD DATA AND FIRST AID

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### EXPOSURE LIMITS:

Unless specified otherwise, limits are expressed as a time-weighted average (TWA) concentration for an 8-hour work shift of a 40-hour workweek. Limits for cristobalite and tridymite (other forms of crystalline silica) are equal to one-half the limits for quartz.

### ABBREVIATIONS:

**ACGIH TLV:** Threshold limit value of the American Conference of Governmental Industrial Hygienists (ACGIH), expressed as a time weighted average (TWA) concentration for an 8-hour work-day and a 40-hour workweek.

**mg/m<sup>3</sup>:** Milligrams of substance per cubic meter of air.

**NIOSH REL:** Recommended exposure limit of the National Institute for Occupational Safety and Health (NIOSH), expressed as a TWA concentration for up to a 10-hour work-day during a 40-hour workweek.

**OSHA PEL:** Permissible exposure limit of the federal Occupational Safety and Health Administration (OSHA), expressed as a time weighted average (TWA) concentration for an 8-hour work-day and a 40-hour workweek.

**Calcium Carbonate:** OSHA PELs (respirable fraction) 5 mg/m<sup>3</sup>, (total dust) 15 mg/m<sup>3</sup>, ACGIH TLV 10 mg/m<sup>3</sup>, NIOSH REL (respirable) 5 mg/m<sup>3</sup>, (total) 10 mg/m<sup>3</sup>.

**Crystalline Silica SiO<sub>2</sub>:** OSHA PELs (respirable fraction) [10 mg/m<sup>3</sup> ÷ (% SiO<sub>2</sub>+2)], (total dust) [30 mg/m<sup>3</sup> ÷ (% SiO<sub>2</sub>+2)]; ACGIH TLV (respirable fraction) 0.05 mg/m<sup>3</sup>, NIOSH REL (respirable fraction) 0.05 mg/m<sup>3</sup>.

**Amorphous Silica:** OSHA PEL [80 mg/m<sup>3</sup> ÷ % SiO<sub>2</sub>]; ACGIH TLV (inhalable fraction) 10 mg/m<sup>3</sup>, (respirable fraction) 3 mg/m<sup>3</sup>, NIOSH REL (total dust) 6 mg/m<sup>3</sup>.

**Alumina Al<sub>2</sub>O<sub>3</sub>:** OSHA PEL (respirable fraction) 5 mg/m<sup>3</sup>, (total dust) 15 mg/m<sup>3</sup>, ACGIH TLV 10 mg/m<sup>3</sup>.

**Portland Cement:** OSHA PEL (respirable) 5 mg/m<sup>3</sup>, (total dust) 15 mg/m<sup>3</sup>, ACGIH TLV (total dust) 10 mg/m<sup>3</sup>, NIOSH REL (respirable) 5 mg/m<sup>3</sup>, (total) 10 mg/m<sup>3</sup>.

**Iron Oxide Fe<sub>2</sub>O<sub>3</sub>:** OSHA PEL 10 mg/m<sup>3</sup>, ACGIH TLV 5 mg/m<sup>3</sup>, NIOSH REL 5 mg/m<sup>3</sup>.

**Other Particulates:** OSHA PEL (total particulate, not otherwise regulated) 15 mg/m<sup>3</sup>, (respirable particulate, not otherwise regulated) 5 mg/m<sup>3</sup>, ACGIH TLV (nuisance particulates) 10 mg/m<sup>3</sup> (inhalable); 5 mg/m<sup>3</sup> (respirable).

**HEALTH HAZARDS:** (Sawing or grinding may result in release of dust particles which may present the following hazards.)

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## Primary Route(s) of Entry:

- Inhalation:** Yes  
**Skin:** No  
**Ingestion:** No

## Acute:

- Eye Contact:** Minor irritation to the eyes or nose.  
**Inhalation:** Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits.  
**Skin contact:** Direct contact may cause irritation by mechanical abrasion.  
**Ingestion:** Ingestion of large amounts may cause gastrointestinal irritation and blockage.

## Chronic:

- Inhalation:** Chronic exposure to respirable dust in excess of appropriate exposure limits may cause lung disease. Silicosis may result from excessive exposure to respirable silica dust for prolonged periods. Not all individuals with silicosis will exhibit symptoms. Silicosis is progressive and symptoms can appear at any time, even after exposure has ceased. Symptoms may include shortness of breath, coughing, or right heart enlargement and/or failure. Persons with silicosis have an increased risk of pulmonary tuberculosis infection. Tobacco smoking may increase the risk of developing lung disorders, including emphysema and lung cancer.

- Carcinogenicity:** Concrete masonry is not listed as a carcinogen by the National Toxicology Program (NTP), OSHA or the International Agency for Research on Cancer (IARC). However, crystalline silica is classified by IARC as a carcinogenic to humans (Group 1). The NTP has characterized respirable silica as "known to be a human carcinogen". Prolonged and repeated breathing of silica may cause lung cancer.

## Signs & Symptoms

- of Exposure:** Dust irritation of eyes and/or respiratory system.

## Medical Conditions

### Generally

### Aggravated

- by Exposure:** Inhaling respirable dust may aggravate existing respiratory system disease(s) and/or dysfunctions such as emphysema or asthma. Exposure may aggravate existing eye conditions.

## EMERGENCY & FIRST AID PROCEDURES:

- Eyes:** Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.
- Inhalation:** Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.
- Skin:** Wash with soap and water. Contact a physician if irritation persists or later develops.
- Ingestion:** If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.

## 7. PERSONAL PROTECTION AND CONTROL MEASURES

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**Ventilation:** Local exhaust or general ventilation adequate to maintain exposures below appropriate exposure limits.

**Other:** Respirable dust and silica levels should be monitored regularly. Dust and silica levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee work stations.

### Respiratory

**Protection:** When dust or silica levels exceed or are likely to exceed appropriate exposure limits, follow MSHA or OSHA regulations, as appropriate, for use of NIOSH-approved respiratory protection equipment.

**Skin Protection:** Protective gloves should be worn to prevent mechanical injury.

**Eye Protection:** Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessive (visible) dust conditions are present or anticipated. Contact lenses should not be worn when working with this product.

**Hygiene:** Ordinary personal hygiene.

## 8. STORAGE AND HANDLING PRECAUTIONS

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Respirable silica and dust may be generated during sawing or grinding. The personal protection and controls identified in Section VII of the MSDS should be applied as appropriate.

## 9. SPILL, LEAK AND DISPOSAL PRACTICES

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The personal protection and controls identified in Section VII of the MSDS should be applied as appropriate.

**Steps to Be Taken if Material Is Released or Spilled:** Material may be released when product is sawed or ground. Released materials may overexpose cleanup personnel to respirable silica and dust. Wetting of released material and/or use of respiratory protective equipment may be necessary. Do not dry sweep released material.

**Waste Disposal Method:** Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.

NOTICE: Based on research of available data, Titan America LLC believes that the information contained in this Material Safety Data Sheet is accurate. The suggested procedures are based on data and experience as of the date of preparation of the MSDS. The suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements. Titan America LLC's voluntary preparation of this MSDS should not be construed, in any way, as an agreement to be subject to OSHA jurisdiction.