

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Product name : Alpha Star  
Other means of identification : Alpha Star

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture : Refractory products, Highway Aggregate

**1.3. Details of the supplier of the safety data sheet**

FX Minerals Processing  
257 Kennedy Park Marina Road  
Newell, WV 26050  
(304) 387-1160

**1.4. Emergency telephone number**

Emergency number : (304) 387-1160  
After 5PM weekdays, weekends and holidays: (814) 360-9040

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS-US classification**

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Not Classified

**2.2. Label elements****GHS-US labelling**

Hazard pictograms (GHS-US) :

NOT APPLICABLE

Signal word (GHS-US) : No Signal Word

Hazard statements (GHS-US) : Not Applicable

Precautionary statements (GHS-US) :

NOT APPLICABLE

**2.3. Other hazards**

Other hazards not contributing to the classification : Other constituents in this product are considered nuisance particles or dust. Exposure to dusts or powders may cause mechanical irritation of the respiratory system, eyes, and skin.

**2.4. Unknown acute toxicity (GHS-US)**

99.3 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Aluminum Oxide	(CAS No) 1344-28-1	>90%	STOT Rep. Exp.1
Titanium Dioxide	(CAS No) 13463-67-7	<4.0	Not classified

Full text of H-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
First-aid measures after inhalation	: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.
First-aid measures after skin contact	: Use good hygiene practices including washing of skin with soap and water. If irritation occurs, seek medical attention.
First-aid measures after eye contact	: In case of eye contact, flush eyes with water. If necessary, seek medical attention.
First-aid measures after ingestion	: Not an anticipated route of exposure. If a large amount is swallowed, get medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: There are potential chronic health effects to consider.
Symptoms/injuries after inhalation	: May cause respiratory irritation
Symptoms/injuries after skin contact	: No known significant effects or critical hazards
Symptoms/injuries after eye contact	: May cause eye irritation
Symptoms/injuries after ingestion	: No known significant effects or critical hazards

#### 4.3 Over – Exposure Signs/Symptoms

Signs/Symptoms eye contact	May cause eye irritation. No chronic effect known
Signs/Symptoms inhalation	Long term exposure to high airborne concentrations may result in inflammation of the small airways and asthma-like symptoms
Signs/Symptoms skin contact	No known significant effects or critical hazards
Signs/Symptoms ingestion	No known significant effects or critical hazards

#### 4.4. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Seek medical care if large quantities have been ingested or inhaled.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Any. Use media appropriate for surrounding fire.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : No specific fire or exposed hazard

Reactivity : Not reactive under normal use and conditions.

#### 5.3. Advice for firefighters

Protection during firefighting : Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Products are naturally occurring earthen materials. No special precautions are known.

##### 6.1.1. For non-emergency personnel

Emergency procedures : Products are naturally occurring earthen materials. No special precautions are known

##### 6.1.2. For emergency responders

Protective equipment : Products are naturally occurring earthen materials. No special precautions are known

Emergency procedures : Products are naturally occurring earthen materials. No special precautions are known

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Do not touch or walk through spilled material.

Methods for cleaning up : Completely remove dusts to prevent recirculation of nuisance dust. For small spills, clean with a vacuum with a filtration system sufficient to remove and prevent dust recirculation. For large spills, use a fine spray or mist to control dust creation and carefully scoop or shovel into clean, dry container for later reuse or disposal. DO NOT USE DRY SWEEPING OR COMPRESSED AIR TO CLEAN SPILLS.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Wear personal protective equipment in accordance with those recommendations provided in Section 8. Use good hygiene practices and wash hands and face before eating, drinking or conducting personal hygiene. Reduce contamination from clothing and protective equipment before entering eating areas.

Hygiene measures : Practice good housekeeping. Wash thoroughly after handling. Change contaminated clothing. Do not reuse until laundered.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Containers should be stored in room at ambient temperature and pressure. Keep container closed when not in use.

#### 7.3. Specific end use(s)

Use of the substance/mixture : Refractory products, Highway aggregate

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Calcined Bauxite (1318-16-7)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (Total dust); 5 mg/m <sup>3</sup> (Respirable Fraction)
Aluminum Oxide (1344-28-1)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	>= 15 mg/m <sup>3</sup> /Total
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	>= 5 mg/m <sup>3</sup> /Resp.
Titanium Dioxide (13463-67-7)		

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ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>

### 8.2. Exposure controls

Ingredient comments: Occupational exposure to respirable dust should be monitored and controlled. The product should be handled using methods and techniques that minimize or eliminate dust generation. The product contains less than 1% w/w RCS (respirable crystalline silica) as determined by XRD Methods (NIOSH 7500).

Hand protection	: None required. Polymeric gloves are recommended to prevent irritation. Nitrile construction materials appear to offer the best protection against the ingredients of the product.
Eye protection	: Chemical goggles or safety glasses.
Skin and body protection	: Under dusty conditions or when excessive skin contact is likely, wear coveralls or other suitable work clothing.
Respiratory protection	: Wear NIOSH/MSHA approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if exposure limits are exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Personal protective equipment	: Avoid all unnecessary exposure.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Color	: Grayish in Color
Odor	: No data available
Odor threshold	: No data available
pH	: 6.5 - 8
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 1648 °C (3000 °F)
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: 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	: 0.9 - 2 (water = 1)
Solubility	: Insoluble Water: Solubility in water of component(s) of the mixture:
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: Not applicable

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Not reactive under normal use and conditions.

#### 10.2. Chemical stability

Stable at normal temperatures and pressure.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

Avoid generating dust.

#### 10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

Combustion may produce carbon monoxide and other harmful substances

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Acute toxicity (Oral LD50) Not relevant

Acute Toxicity (Dermal LD50) Not relevant

Acute Toxicity (Inhalation) Not Relevant

This substance has no evidence of carcinogenic properties

Inhalation: May cause irritation in respiratory system from highly concentrated dust

Ingestion: May cause discomfort if swallowed

Skin Contact: May cause discomfort on skin

Eye Contact: Particles in eyes may cause irritation

### SECTION 12: Ecological information

#### 12.1. Toxicity

Not expected to be toxic to aquatic organisms.

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bio accumulative potential

Bio accumulative potential	This product is not expected to bio accumulate.
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#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of as inert solid in landfill. Dispose of waste material according to Local, State and Federal environmental regulations. Never discharge directly into sewers or surface waters. Slurry may plug drains.

### SECTION 14: Transport information

In accordance with  
DOT not regulated  
for transport

#### Additional information

Other information : No supplementary information available.

#### ADR

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Chinese Bauxite

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

##### Calcined Bauxite (1318-16-7)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

##### Titanium Dioxide (13463-67-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

(EC) No. 453/2010

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

H372 - Causes damage to lungs through prolonged or repeated exposure via inhalation

#### 15.2.2. National regulations

No additional information available

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### 15.3. US State regulations

#### Titanium Dioxide (13463-67-7)

U.S. - New Jersey - Right to Know Hazardous Substance List  
Aluminum Oxide (CAS 1344-28-1)  
Titanium Dioxide (CAS 13463-67-7)

U.S. - Massachusetts - Right to Know List  
Aluminum Oxide (CAS 1344-28-1)  
Titanium Dioxide (CAS 13463-67-7)

U.S. - Pennsylvania - Right to Know List  
Aluminum Oxide (CAS 1344-28-1)  
Titanium Dioxide (CAS 13463-67-7)

### SECTION 16: Other information

Revision date 08/25/2015

Data sources : ChemADVISOR, Inc. [https://www.chemadvisor.com]. GESTIS DNEL Database [http://dnel-en.itrust.de/nxt/gateway.dll/dnel\_en/000000.xml?f=templates\$fn=default.htm\$vid=dneleng:ddb eng\$3.0/].

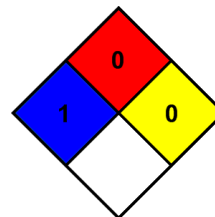
Full text of H-phrases:

STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
H372	Causes damage to organs through prolonged or repeated exposure

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

Personal Protection : E

SDS US (GHS HazCom 2012)

**CALIFORNIA Prop 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm**

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