

MATERIAL SAFETY DATA SHEET

1. PRODUCT COMPANY AND IDENTIFICATION

Trade Name SPEC SULFONATED ASPHALT
Generic Description Sulfonated Asphalt
Manufacturer/Supplier Agri-Empresa, Inc
Address 6001 West Industrial
Midland, TX 79706
Phone Number 432-694-1994

2. COMPOSITION/INFORMATION ON THE COMPONENTS

Material or Component	OSHA PEL	CAS Number	Percentage
Sulfonated Asphalt			100%
Crystalline Silica	See below	14808-60-7	<1%

3. HAZARD IDENTIFICATION

Hazard Data Product may irritate eyes, skin, mucous membranes and upper respiratory system with overexposure. Prolonged inhalation (chronic) of dust may result in lung damage. Low concentrations of crystalline silica (SiO₂) in the form of quartz, cristobalite or tridymite may be present.

Health 1
Flammability 1
Reactivity 0 Ratings based on NPFA

The OSHA Permissible Exposure Limits from Table Z-3 Mineral Dusts are:
Crystalline Silica

Quartz (Respirable) $\frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$

Quartz (Total Dust) $\frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$

Inhalation:

Breathing dust may cause irritation of the nose, throat and respiratory passages. Breathing dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also cause silicosis.

Cancer Status: The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is

carcinogenic to humans (Group 1 -- carcinogenic to humans). The National Toxicology Program (NTP) classified respirable crystalline silica as "known to be a human carcinogen". The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Skin Contact:

May be irritating to the skin with prolonged contact.

Eye Contact:

May cause irritation to the eyes and could cause prolonged impairment of vision.

Ingestion:

Not anticipated route of exposure. If ingested may be irritating to mouth, throat and stomach.

Chronic Health Effects

See Inhalation subsection above.

Medical Conditions Aggravated by Exposure

Emphysema, asthma, bronchitis or other respiratory problems.

4. FIRST AID MEASURES

Inhalation:

Remove person to fresh air. Get medical attention for any breathing difficulty.

Skin Contact:

Wash exposed area with soap and water. Remove contaminated clothing and wash before reuse. Get medical advice if irritation develops.

Eye Contact:

Wash thoroughly with large amounts of running water for at least 15 minutes. Remove contact lenses if worn. Get medical advice if irritation develops.

Ingestion:

If large amounts were ingested, give water to drink, do not induce vomiting and get medical advice.

Advice to Physicians

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flash Point	Not applicable
Flammable Limits	Not applicable
Fire Extinguishing Media	Water, carbon dioxide, dry powder or foam

Unusual Fire and Explosion Hazard Airborne dust concentrations may create a dust explosion hazard.

6. ACCIDENTAL RELEASE MEASURES

Release or Spill

Avoid creating dusty conditions. Collect and place in suitable container for reuse or disposal.

Personal Precautions

Avoid breathing dust. Wear appropriate protective equipment.

Environmental Precautions

None known.

7. HANDLING AND STORAGE

Handling This product may contain crystalline silica. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear NIOSH approved respirator or equivalent when using this product. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary.

Storage Store in a cool dry place with adequate ventilation. Keep away from oxidizing agents and ignitions sources, heat and open flames. Use good housekeeping in storage and work areas to prevent accumulation of dust.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Airborne Exposure Limits

See Section 3

Ventilation Requirements:

A system of local and/or general exhaust is recommended if handled in a confined area to control below recommended exposure levels.

Respiratory Protection

Use NIOSH approved nuisance dust respirator. Use NIOSH approved mechanical filter respirator when dust levels exceed applicable exposure limits.

Skin Protection

Wear long sleeved clothing and work gloves.

Eye Protection

Wear safety glasses with side shields. Maintain eye wash station in work area.

Other Protection Equipment/Clothing

Airborne Exposure Limits

OSHA Permissible Exposure Limit (PEL) 15 mg/m³ total dust, 5 mg/m³ respirable fraction for nuisance dusts.

Ventilation Requirements:

A system of local and/or general exhaust is recommended if handled in a confined area.

Respiratory Protection

Use NIOSH approved nuisance dust respirator.

Skin Protection

Not normally necessary. Wear long sleeved clothing and work gloves to prevent repeated or prolonged skin contact.

Eye Protection

Wear safety glasses with side shields. Maintain eye wash station in work area.

Other Protection Equipment/Clothing

As appropriate for work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Powder
Color	Off White to Light Yellow
Odor	None
pH	6.5-8.0 at (1% solution)
Specific Gravity	1.5 - 1.6
Boiling Range/Point	Not applicable
Flash Point	430°F
Explosion Limits (%)	Not determined
Density	40-55 lb/cu.ft.
Solubility in Water	Soluble
Vapor Density (Air=1)	Not applicable
Evaporation Rate (butyl acetate=1)	Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use and storage.

Materials to Avoid: Excessive heat, sparks, flame and strong oxidizers.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: Oxides of carbon

11. TOXICOLOGICAL INFORMATION

Oral toxicity: LD50: 1260 mg/kg (rat).

Cancer Status: Not listed as carcinogen by IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

No ecotoxicity data is available. This product is not expected to present an environmental hazard. Readily biodegradable.

13. DISPOSAL

Dispose of material in accordance with all local, state, and federal regulations.

14. TRANSPORTATION INFORMATION

UN Proper Shipping Name	Not regulated
UN Label	None
UN Identification Number	None
Hazardous Ingredients	None
Placards	None
Reportable Quantity	None

15. REGULATORY INFORMATION

TSCA Listed	Yes
SARA Title III Section 302	No
SARA Title III Section 311/312	No
SARA Title III Section 313	No
Canada DSL	Yes

16. OTHER INFORMATION

Abbreviations

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

NIOSH: National Institute for Occupational Safety & Health

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

LC50: Lethal Concentration 50%

MSDS Date: 07/2006

Disclaimer: All information and recommendations concerning product is based on tests and data believed to be reliable; however it is the user's responsibility to determine the safety, toxicity and suitability for the user's own use of the product described herein. Since the actual use by others is beyond our control, no guarantee expressed or implied is made by Grinding & Sizing Company. Nor is the information herein to be construed as absolutely complete since additional

SPEC SULFONATED ASPHALT

SULFONATED ASPHALT

Technical Data Sheet

Description: SPEC SULFONATED ASPHALT is a proprietary blended water soluble additive that stabilizes shale formations, aids in API fluid loss control, and lowers HTHP fluid loss in water based drilling fluids.

TYPICAL PROPERTIES

Appearance: dark brown to black powder

Specific Gravity: 1.2 – 1.5

Solubility in DI Water: 75% MINIMUM

Performance Data @ 5ppb:	<u>Base Mud</u>	<u>SPEC S.A.</u>
Fann 600:	112	111
Fann 300:	61	60
Fann 200:	43	41
Fann 100:	23	22
Fann 6:	2.5	2.5
Fann 3:	1.5	2.0
PV:	51	51
YP:	10	9
10 sec gel strength:	3	3
10 min gel strength:	3	3
API Filtrate:	6.4	5.0
HPHT Filtrate @ 275F:	22.4	17.2

Standard Packaging: 50 LB Bag, 40 Bags/Pallet