



MATERIAL SAFETY DATA SHEET (MSDS)

TruGraphene® Asphalt Reinforcer

Manufacturer:

Graphene Solid State Group LLC

Main Location:

30 N Gould St STE R
Sheridan, WY 82801

Production Facility:

1349 Lynn Ave
Bethlehem, PA 18015

Phone:

610-883-8243

1. IDENTIFICATION

Product Name:

TruGraphene® Asphalt Reinforcer

Recommended Use:

Additive for asphalt paving applications to enhance mechanical performance, durability, and lifespan.

Restrictions on Use:

For industrial and professional use only.

2. HAZARDS IDENTIFICATION

Classification (per OSHA 29 CFR 1910.1200):

- Skin Irritation – Category 2
- Eye Irritation – Category 2B
- Specific Target Organ Toxicity (Single Exposure) – Category 3 (Respiratory)

Signal Word:

WARNING

Hazard Statements:

- Causes skin irritation
- Causes eye irritation
- May cause respiratory irritation if dust is generated during blending

Precautionary Statements:

- Avoid breathing dust or fumes
- Use only outdoors or in well-ventilated areas
- Wear protective gloves, clothing, and eye protection
- Wash thoroughly after handling

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Concentration (% by weight)
Graphene Nanomaterial	Proprietary	Proprietary (Trade Secret)
Mineral Fillers and Modifiers	Proprietary	Proprietary
Silica (Quartz)	14808-60-7	Proprietary

Note: Exact formulation is proprietary and considered a trade secret. Additional details will be disclosed to qualified health professionals or regulatory authorities upon request.

4. FIRST AID MEASURES

Eye Contact:

Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present. Seek medical attention if irritation persists.

Skin Contact:

Wash with soap and water. Remove contaminated clothing and wash before reuse.

Inhalation:

Remove person to fresh air. If symptoms persist, seek medical attention.

Ingestion:

Rinse mouth. Do not induce vomiting. Seek medical advice.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Not flammable in dry form. Use extinguishing media suitable for surrounding materials.

Hazardous Combustion Products:

Carbon oxides, silica dust, and trace hydrocarbons if mixed with bitumen during fire.

Protective Equipment:

Self-contained breathing apparatus and standard turnout gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid dust generation. Use PPE.

Environmental Precautions:

Prevent release into drains and waterways.

Cleanup Methods:

Collect mechanically. Avoid creating airborne dust.

7. HANDLING AND STORAGE

Handling:

- Avoid generating dust.
- Use PPE.
- Wash hands after handling.

Storage:

- Keep dry and in sealed containers.
 - Store in a cool, well-ventilated area.
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

Component	OSHA PEL	ACGIH TLV
Respirable Silica	10 mg/m ³ / (%SiO ₂ + 2)	0.025 mg/m ³ (respirable)

Engineering Controls:

Provide local exhaust ventilation where dust may be generated.

PPE:

- **Eye/Face Protection:** Safety goggles
 - **Skin Protection:** Impervious gloves
 - **Respiratory Protection:** NIOSH-approved respirator if exposure limits are exceeded
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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Grey to black powder

Odor: Slight mineral odor

pH: Not applicable

Melting Point: >1,000 °C

Flash Point: Not flammable

Solubility: Insoluble in water

Density: ~2.2–2.6 g/cm³

10. STABILITY AND REACTIVITY

Reactivity:

Stable under normal conditions.

Chemical Stability:

Stable.

Hazardous Reactions:

None under recommended conditions.

Decomposition Products:

Thermal decomposition with bitumen may produce carbon oxides.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure:

Inhalation, skin, and eye contact.

Acute Effects:

May cause irritation to eyes, skin, and respiratory tract.

Chronic Effects:

Prolonged inhalation of respirable silica may cause silicosis.

Carcinogenicity:

IARC Group 1 (Respirable Crystalline Silica).

12. ECOLOGICAL INFORMATION

Ecotoxicity:

No acute hazards expected in dry form.

Persistence:

Non-biodegradable.

Bioaccumulation:

Not expected.

13. DISPOSAL CONSIDERATIONS

Dispose in compliance with local, regional, and federal regulations.

14. TRANSPORT INFORMATION

UN Number: Not regulated

Transport Hazard Class: Not applicable

Packing Group: Not applicable

15. REGULATORY INFORMATION

OSHA Status: Hazardous

TSCA: All components listed or exempt

California Proposition 65: Contains respirable crystalline silica

16. OTHER INFORMATION

Revision Date:

07/01/2025

Disclaimer:

The information herein is believed to be accurate and reliable. No warranty is expressed or implied. Formulation details are proprietary and protected under trade secret law.