



MATERIAL SAFETY DATA SHEET (MSDS)

GILSONITE – NATURAL ASPHALT / UINTAITE

SECTION 1 – IDENTIFICATION

Product Name: Gilsonite

Chemical Name: Uintaite / Natural Asphalt

Synonyms: Natural Bitumen, Natural Asphalt, Uintaite, Uintahite, Asphaltene

CAS Number: 12002-43-6

Chemical Family: Naturally Occurring Hydrocarbon

Physical Form: Solid, powder or granular material

Recommended Uses:

Asphalt and bitumen modification, drilling fluid additive, cement additive, foundry applications, paints, coatings, printing inks and other industrial applications. These uses are consistent with current commercial Gilsonite applications.

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification:

Combustible Dust – Category 1, depending on particle size and handling conditions.

Signal Word: WARNING

Hazard Statement:

May form combustible dust concentrations in air.

Other Potential Hazards:

- Dust may cause temporary mechanical irritation to the eyes.
- Excessive dust inhalation may irritate the nose, throat and respiratory tract.
- Repeated or prolonged skin contact may cause dryness or mild irritation.
- Ingestion may cause gastrointestinal discomfort.
- Fine dust dispersed in air may present a dust explosion hazard in the presence of an ignition source.

A 2023 American Gilsonite SDS classifies its HMA Gilsonite product as combustible dust and notes possible mild irritation of the eyes, skin and respiratory system.

Precautionary Measures:

- Avoid generating airborne dust.
- Keep away from heat, sparks, flames and other ignition sources.
- Prevent accumulation of dust on surfaces.
- Keep containers tightly closed.
- Use adequate ventilation.
- Ground and bond equipment during bulk transfer where static electricity may develop.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Concentration
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Gilsonite / Uintaite	12002-43-6	Up to 100%
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Gilsonite is a naturally occurring complex solid hydrocarbon material. Commercial SDS documentation identifies Uintaite/Gilsonite under CAS 12002-43-6.



Minor naturally occurring mineral matter may be present depending on the source and grade.

SECTION 4 – FIRST AID MEASURES

Inhalation:

Move the affected person to fresh air. Keep at rest in a position comfortable for breathing. If coughing, breathing difficulty or irritation persists, obtain medical attention.

Eye Contact:

Flush eyes gently with clean water for at least 10–15 minutes. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.

Skin Contact:

Wash thoroughly with soap and water. Remove contaminated clothing. Seek medical advice if irritation develops or persists.

Ingestion:

Rinse mouth with water. Do not induce vomiting unless instructed by medical personnel. Give water to drink if the person is conscious. Obtain medical attention if significant quantities are swallowed or symptoms develop.

Current supplier SDS guidance similarly recommends fresh air after inhalation, washing after skin contact, flushing the eyes with water and avoiding induced vomiting after ingestion.

SECTION 5 – FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

- Water fog or fine spray
- Dry chemical powder
- Carbon dioxide (CO₂)
- Foam

Unsuitable Extinguishing Media:

Avoid high-pressure or solid water streams that may disperse burning powder or dust.

Specific Fire Hazards:

Fine Gilsonite dust suspended in air can form combustible or explosive dust-air mixtures.

Hazardous Combustion Products:

Thermal decomposition or combustion may produce:

- Carbon monoxide
- Carbon dioxide
- Nitrogen oxides
- Smoke and irritating hydrocarbon fumes

Firefighter Protection:

Firefighters should wear appropriate protective clothing and self-contained breathing apparatus when required.

These fire and dust-explosion precautions are consistent with current Gilsonite SDS guidance.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions:

- Avoid inhalation of dust.



- Wear appropriate PPE.
- Eliminate ignition sources.
- Avoid creating airborne dust.
- Use non-sparking equipment where combustible dust may be present.

Environmental Precautions:

Prevent large quantities from entering drains, sewers, surface water or groundwater.

Cleanup Methods:

Carefully sweep, shovel or vacuum spilled material using equipment suitable for combustible dust. Place collected material in appropriate containers for reuse or disposal.

Do not use cleanup methods that generate large clouds of dust.

SECTION 7 – HANDLING AND STORAGE**Handling:**

- Handle in a well-ventilated area.
- Minimize dust generation and accumulation.
- Avoid breathing dust.
- Avoid unnecessary contact with eyes and skin.
- Keep away from flames, sparks and hot surfaces.
- Use grounded equipment when transferring powder in bulk.
- Wash hands thoroughly after handling.

Storage:

- Store in a cool, dry and well-ventilated location.
- Keep containers/bags closed when not in use.
- Protect from moisture.
- Keep away from strong oxidizing agents.
- Keep away from ignition sources.

Current Gilsonite SDS documentation recommends cool, dry storage, control of dust accumulation and separation from strong oxidizing agents.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**Engineering Controls:**

Provide adequate general ventilation and local exhaust ventilation when significant dust is generated.

Dust handling and collection systems should be designed for combustible particulate solids where applicable.

Eye Protection:

Safety glasses with side shields. Use goggles in high-dust conditions.

Hand Protection:

Protective work gloves.

Skin Protection:

Normal industrial protective clothing.

Respiratory Protection:

Under normal low-dust conditions, respiratory protection may not be required. Where airborne



dust exceeds applicable occupational exposure limits, use an approved particulate respirator according to local regulations.

General Hygiene:

Do not eat, drink or smoke while handling the product. Wash hands after use.

A current Gilsonite SDS recommends safety glasses, suitable gloves and approved respiratory protection where airborne concentrations exceed permissible limits.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black to dark brown solid, powder or granules

Odor: Odorless to slight hydrocarbon odor

Physical State: Solid

pH: Not applicable / not determined

Water Solubility: Insoluble

Boiling Point: Not applicable

Vapor Pressure: Not applicable / negligible under normal conditions

Vapor Density: Not applicable

Evaporation Rate: Not applicable

Specific Gravity: Typically approximately 1.0–1.1, depending on grade

Softening Point: Grade dependent

Flash Point: High; product-specific data should be used

Explosive Properties: Fine airborne dust may form combustible/explosive mixtures

Oxidizing Properties: Not an oxidizing material

A 2023 commercial Gilsonite SDS describes the product as dark-brown solid powder, odorless to slightly odorous and insoluble in water.

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:

Not normally reactive under recommended conditions.

Chemical Stability:

Stable under normal handling and storage conditions.

Possibility of Hazardous Reactions:

Hazardous polymerization is not expected.

Conditions to Avoid:

- Excessive heat
- Open flames
- Sparks
- Dust accumulation
- Uncontrolled airborne dust formation

Incompatible Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, nitrogen oxides and irritating fumes may be produced during combustion.



Gilsonite is described as stable under normal conditions, with strong oxidizing agents listed as incompatible materials.

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:

- Inhalation
- Eye contact
- Skin contact
- Accidental ingestion

Acute Effects

Inhalation:

High concentrations of dust may irritate the nose, throat and respiratory tract.

Eye Contact:

Dust may cause mechanical irritation, redness or tearing.

Skin Contact:

Prolonged or repeated exposure may cause dryness or mild irritation.

Ingestion:

May cause gastrointestinal irritation, nausea, vomiting or diarrhea if significant quantities are ingested.

Carcinogenicity:

Current commercial Gilsonite SDS documentation reports that its components are not listed as carcinogens by IARC, OSHA, NTP or ACGIH.

Mutagenicity:

Not expected to be mutagenic based on available commercial SDS information.

Reproductive Toxicity:

Not expected to cause reproductive toxicity based on available information.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:

Not expected to present significant acute aquatic toxicity under normal conditions of use.

Persistence and Degradability:

Gilsonite is a naturally occurring, water-insoluble hydrocarbon solid and may persist in the environment.

Bioaccumulative Potential:

No significant bioaccumulation is expected based on available supplier data.

Mobility in Soil:

Low mobility is expected because of low water solubility.

Environmental Precautions:

Avoid uncontrolled discharge of large quantities into surface water, drainage systems or groundwater.

Current supplier data report low measured aquatic toxicity and characterize the material as non-readily biodegradable.



SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of unused product, contaminated packaging and cleanup material in accordance with applicable local, national and international environmental regulations.

Where uncontaminated and technically possible, material may be recovered or recycled.

Do not dispose of large quantities into drains, waterways or the environment.

Waste classification must be determined according to the jurisdiction and the manner in which the material has been used or contaminated.

SECTION 14 – TRANSPORT INFORMATION

UN Number: Not assigned

UN Proper Shipping Name: Not regulated

Transport Hazard Class: Not regulated

Packing Group: Not applicable

Marine Pollutant: Not classified as a marine pollutant under normal transport conditions.

According to the referenced commercial SDS, Gilsonite is not regulated as dangerous goods under **DOT, TDG, ICAO/IATA or IMDG** transport frameworks.

Special Precautions:

Protect bags or containers from physical damage, moisture and excessive heat. Avoid dust generation during loading and unloading.

SECTION 15 – REGULATORY INFORMATION

Regulatory requirements vary according to country and jurisdiction.

The product should be handled and labelled according to applicable:

- GHS requirements
- Occupational health and safety regulations
- Combustible dust regulations
- Environmental regulations
- Waste disposal requirements

For commercial export, the supplier should verify the applicable requirements in the destination country.

SECTION 16 – OTHER INFORMATION

Product: Gilsonite / Natural Asphalt / Uintaite

CAS No.: 12002-43-6

Document Type: Material Safety Data Sheet / Safety Data Sheet

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Disclaimer:

The information contained in this Safety Data Sheet is provided in good faith and is intended as general guidance for safe handling, storage, transportation and use of Gilsonite. Physical and chemical properties may vary according to product grade, origin and manufacturing or processing conditions. Users are responsible for determining the suitability of the product for their intended application and for complying with all applicable safety, environmental and regulatory requirements.