1. DESCRIPTION

Trade Name: GILSONITE

Chemical Class: Mineral

Chemical Name: Gilsonite

Application: Shale Inhibitor, Fluid Loss Controller, HPHT Fluid Loss Controller

Supplier: TEAM Chemicals

Telephone: +44 (0)207 408 7700 - +98 912 3717539

Address: No. 43, Souri St., 43 Ashrafi Esfahani Expressway

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients

INGREDIENT NAME:	CAS No:	CONTENTS:	EPARQ:	TPQ:
Gilsonite	12002-43-6	100%	-	-

Note: Ash content is between 5 and 20%.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: CAUTION! MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. Avoid contact with eyes, skin and clothing. Avoid breathing airborne product. Keep container closed. Use with sufficient ventilation. Wash thoroughly after handling.

Potential Acute Health Effects: Particulates may cause mechanical irritation to the eyes, nose, throat and lungs. Particulate inhalation may lead to pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma. Dermatitis and asthma may result from short contact periods.

Potential Chronic Health Effects:

CARCINOGENICITY:

IARC: Not listed. OSHA: Not regulated. NTP: Not listed.

ROUTE OF ENTRY:

Inhalation. Skin and/or eye contact.

TARGET ORGANS:

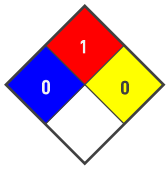
Respiratory system, lungs. Skin. Eyes.

Irritant YES Flammable Slightly

Carcinogenic NO Oxidant NO

Explosive NO Environmental Hazard NO

Corrosive NO



4. FIRST AID MEASURES

Eye Contact: This substance may cause eye irritation due to the abrasive action of the dust. The degree of the injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment.

Skin Contact: This substance is not expected to cause prolonged or significant skin irritation. This hazard evaluation is based on data from similar materials.

Inhalation: Breathing the dust at concentrations that exceed the recommended exposure standard may be irritating to the respiratory tract. Signs and symptoms of respiratory tract irritation may include, but may not be limited to, one or more of the following: nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty in breathing.

Ingestion: Drink a couple of glasses water or milk. Do NOT induce vomiting unless directed to do so by a physician. Get medical attention.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA Carbon dioxide (CO2). Dry chemicals. Foam. Water spray, fog or mist.

FIRE FIGHTING Carbon dioxide (CO2). Dry chemicals. Foam. Water spray, fog or mist.

FIRE/EXPLOSION HAZARD Dust in high concentrations may form explosive mixtures with air.

FIRE INCOMPATIBILITY May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

PERSONAL PROTECTION Wear proper personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Small Spill: Avoid generating and spreading of dust. Shovel into dry containers. Cover and move the containers. Flush the area with water. Do not contaminate drainage or waterways. Repackage or recycle if possible.

Large Spill:

Avoid generating and spreading of dust. Shovel into dry containers. Cover and move the containers. Flush the area with water. Do not contaminate drainage or waterways. Repackage or recycle if possible.

7. HANDLING AND STORAGE

HANDLING Precautions:

Avoid handling causing generation of dust. Wear full protective clothing for prolonged exposure and/or high concentrations. Eye wash and emergency shower must be available at the work place. Wash hands often and change clothing when needed. Provide good ventilation.

Storage Precautions: Store at moderate temperatures in dry, well-ventilated area. Keep in original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

NGREDIENT NAME:	CAS No.:	OSHA TWA: STEL:	ACGIH TLV TWA: STEL:	UNITS:
Gilsonite	12002-43-6	5	3	mg/m3 resp. dust

PERSONAL PROTECTION

RESPIRATOR Supply natural or mechanical ventilation adequate to exhaust airborne product and keep exposures below the applicable limits.

EYE

Wear dust resistant safety goggles where there is danger of eye contact.

HAND/FEET

Use suitable protective gloves if risk of skin contact

OTHER

Wash promptly with soap and water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination.

ENGINEERING CONTROLS

No exposure limits noted for ingredient(s). Exposure limits are for Particulates Not Otherwise Classified (PNOC). Use appropriate engineering controls such as, exhaust ventilation and process enclosure, to reduce air contamination and keep worker exposure below the applicable limits.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical state and appearance: Powder

Color: Black

Odor: Hydrocarbon

pH: NA

Boiling Point: NA

Melting/Freezing Point: 275 – 400 °F (135 - 205°C)

Specific Gravity: 0.95 – 1.14

Solubility (Water): Insoluble in water

10. STABILITY & REACTIVITY

Chemical Stability: Normally stable

Conditions to Avoid: Avoid heat

Materials to Avoid: Strong oxidizing agents

Special Remarks on Reactivity: Not Defined

Special Remarks on Corrosivity: Not Defined

11. TOXICOLOGICAL INFORMATION

No significant health effects were observed in a chronic feeding study conducted for the National Toxicology Program (NTP) where mice and rats were fed diets containing either 2% or 4% Gilsonite for their lifetimes.
In another study, 10% Gilsonite in benzene applied 3 times a week for
80 weeks to the skin of mice caused no increase in skin cancer over what was observed in the control group.
Gilsonite distilled at approximately 2500 F and dissolved in benzene was a carcinogenic when applied 3 times a week for 80 weeks to the skin of mice.
Although Gilsonite is not a carcinogen, processes in which Gilsonite is brought to very high temperatures may alter its complex hydrocarbon structure and may produce carcinogenic substances.
A sample of Gilsonite heated to 550 F and cooled was not found to be mutagenic in the Ames assay. A sample heated to 650 F and allowed to cool was found to be mutagenic.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Contact TEAM Environmental Affairs for ecological data.

13. DISPOSAL CONSIDERATION

WASTE MANAGEMENT: This product does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc, may render the resulting materials hazardous.

Empty containers retain residues. All labeled precautions must be observed.

DISPOSAL METHODS: Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that containers are empty by RCRA criteria prior to disposal in a permitted industrial landfill.

14. TRANSPORT INFORMATION

U.S. DOT Not regulated

U.S. DOT CLASS: Not regulated

Shipping Description: Not regulated

15. REGULATORY INFORMATION

NAME: Gilsonite	**CAS No: 12002-43-6 Yes**	**TSCA: No CERCLA:No SARA 302:No SARA 313:No DSL (CAN):YES**

Poisons Schedule (SUSMP):

This Product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented):

SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

SARA 311 Categories: 1:

Immediate (Acute) Health Effects.

The components of this product are listed on or are exempt from the following international chemical registries: TSCA (U.S.)

US FEDERAL REGULATIONS:

WASTE CLASSIFICATION: Not a hazardous waste by U.S. RCRA criteria. See Section 13.

15. REGULATORY INFORMATION

NAME: Gilsonite	**CAS No: 12002-43-6 Yes**	**TSCA: No CERCLA:No SARA 302:No SARA 313:No DSL (CAN):YES**

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US FEDERAL REGULATIONS:

WASTE CLASSIFICATION:

Not a hazardous waste by U.S. RCRA criteria. See Section 13.

16. ADDITIONAL INFORMATION

NPCA HMIS HAZARD INDEX: 0 Minimal Hazard

FLAMMABILITY: 1 Slight Hazard

REACTIVITY: 0 Minimal Hazard

NPCA HMIS PERS. PROTECT. INDEX: E - Safety Glasses, Gloves, Dust Respirator

3 Yearly Revised Primary MSDS

Update in Toxicological Information

Update in Ecological Information

TEAM
Tiam Earth Advanced Materials

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