Safety Data Sheet

1. IDENTIFICATION

Product Identifier — **PRISTINE SEA™**

Other means of identification

Synonyms — None known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Address — Fluid Tech LLC
146 Industrial
Park Road
Sweetwater, TN 37874 USA

Telephone — (423) 271-6505

Facsimile — (800) 994-8561

Website — www.fluidtechllc.com

Email address — info@fluidtechllc.com

Emergency Phone — (865) 809-9995

Recommended Use — PRISTINE SEA™ is an organophilic solidifier which will solidify most non-aqueous liquids, such as oils and other hydrocarbons.

Recommended Restrictions — None known.

2. HAZARD(S) IDENTIFICATION

Physical hazards — Not classified.

Health hazards — Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Carcinogenicity Category 1A.

Environmental hazards — Not classified.

OSHA defined hazards — Combustible dust.

Label elements

Pictograms

Signal words — Danger

Hazard statement — May form combustible dust concentrations in air.

H350 — May cause cancer.

Precautionary statement

Prevention

Prevent dust accumulation to minimize explosion hazard.

P201 — Obtain special instructions before use.

P202 — Do not handle until all safety precautions have been read and understood.

P210 — Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 — Keep container tightly closed.

	P240	Ground/bond container and receiving equipment.
	P264	Wash thoroughly after handling.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response		
	P308 + P313	If exposed or concerned: Get medical advice/attention.
	P362	Take off contaminated clothing and wash before reuse.
	P370 + P378	In case of fire: Use appropriate media to extinguish.
Storage	P405	Store locked up.
Disposal	P501	Dispose of contents/container (in accordance with related regulations).

Hazard(s) not otherwise classified (HNOC) WARNING! May form combustible dust concentrations in air (during processing). Material can be slippery when wet.

Supplemental information None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical name	Common name and synonyms	CAS number	%
Quaternary Ammonium Compounds, Bis (hydrogenated Tallow Alkyl) dimethyl, Salts with Bentonite		68953-58-2	87-90
Quartz		14808-60-7	< 3

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation If inhaled, remove to a dust free area. Get medical attention if respiratory irritation develops or if breathing becomes difficult. Inhalation may aggravate existing respiratory illness.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists. Take off contaminated clothing and wash before reuse.

Eye contact Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth with water. Get medical attention if symptoms occur. If ingestion of a large amount does occur, seek medical attention.

Most important symptoms/effects, acute and delayed None known. Dusts may irritate the respiratory tract, skin and eyes.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. No hazards which require special first aid measures.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dust. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed. Take precautionary measures against static discharge. Material can be slippery when wet.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. In case of fire and/or explosion do not breathe fumes.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	High concentration of airborne dust may form explosive mixture with air. This product is combustible at high temperatures. Material can be slippery when wet.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Use only non-sparking tools. Avoid inhalation of dust from the spilled material. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner equipped with HEPA filter.

Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use. Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

Nonsparking tools should be used. For waste disposal, see section 13 of the SDS.

Environmental precautions No special environmental precautions required.

Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Do not flush into surface water. Do not let product enter drains.

7. HANDLING AND STORAGE

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Explosion-proof general and local exhaust ventilation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Do not breathe dust from this material.

Avoid contact with skin and eyes. Avoid prolonged exposure. Should be handled in closed systems, if possible. In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Protect from moisture. Avoid dust formation. Store locked up. Keep away from heat, sparks and open flame. Keep containers tightly closed in a dry, cool and well-ventilated place. Guard against dust accumulation of this material. Store away from incompatible materials (see Section 10 of the SDS).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Quartz (14808-60-7)	TWA	0.1 mg/m3 0.3 mg/m3	Respirable. Total dust.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Additional Components	Type	Value	Form
Nuisance dust. (CAS:N/A)	PEL	5 mg/m3 15 mg/m3	Respirable fraction. Total dust.
	TWA	15 mppcf 5 mg/m3 15 mg/m3 50 mppcf	Respirable fraction. Respirable fraction. Total dust. Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Quartz (14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. ACGIH Threshold Limit Values

Additional Components	Type	Value	Form
Nuisance dust. (CAS: N/A)	TWA	10 mg/m3 3 mg/m3	Inhalable particles. Respirable particles.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Quartz (14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Appropriate engineering Controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. Use only appropriately classified electrical equipment and powered industrial trucks.

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields. Use tight fitting goggles if dust is generated.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Use protective skin cream before handling the product. Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.
Other	Wear suitable protective clothing. Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards	Not available.
General hygiene considerations	Do not breathe dust. When using, do not eat, drink or smoke. Avoid contact with eyes. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Powder
Physical state	Solid
Form	Powder
Color	Off-white
Odor	Odorless
Odor threshold	Not applicable
pH	Not applicable
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	>= 0.1 g/l
Flammability limit - upper (%)	Not applicable
Explosive limit - lower (%)	Not applicable
Explosive limit - upper (%)	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	Not available
Solubility(ies)	
Solubility (water)	Insoluble
Auto-ignition temperature	374 °F (190 °C) Thin Film Ignition

Decomposition temperature	Not applicable
Viscosity	Not applicable
Other information	
Percent volatile	0 % estimated
Specific gravity	1.50 - 1.70

10. STABILITY AND REACTIVITY

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Keep away from heat, sparks and open flame. Avoid dust close to ignition sources. Exposure to moisture. Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation.
Incompatible materials	None known.
Hazardous decomposition products	No dangerous reaction known under conditions of normal use. No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Dust in the eyes will cause irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Dusts may irritate the respiratory tract, skin and eyes.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
PRISTINE SEA™		
Acute		
Dermal		
LD50	Rat	2051.282 mg/kg, 24 hours estimated
Inhalation		
LC50	Rat	205.1282 mg/l estimated
Oral		
LD50	Rat	5128.2051 mg/kg, 24 hours estimated

Components	Species	Test Results
Quaternary Ammonium Compounds, Bis(hydrogenated Tallow Alkyl)dimethyl, Salts with Bentonite (CAS 68953-58-2)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 hours
Inhalation		
LC50	Rat	> 200 mg/l
Oral		
LD50	Rat	> 5000 mg/kg, 24 hours

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Dust in the eyes will cause irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (CAS 14808-60-7) 1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Quartz (CAS 14808-60-7) Known to Be Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity – single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.
Overexposure to dust may result in pneumoconiosis, a respiratory disease caused by inhalation of mineral dust, which can lead to fibrotic changes to the lung tissue, or silicosis, a respiratory disease caused by inhalation of silica dust, which can lead to inflammation and fibrosis of the lung tissue.

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

12. ECOLOGICAL INFORMATION

Ecotoxicity Not expected to be harmful to aquatic organisms. The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Quaternary Ammonium Compounds, Bis(hydrogenated Tallow Alkyl)dimethyl, Salts with Bentonite (CAS 68953-58-2)		
Aquatic		
Algae		
EC50	Selenastrum capricornutum (alga)	> 100 mg/l, 72 hours Growth rate
Crustacea		
EC50	Daphnia	> 100 mg/l, 48 hours OECD 202
NOEC	Daphnia	> 100 mg/l, 48 hours OECD 202
Fish		
LC50	Zebra danio (Danio rerio)	> 100 mg/l, 96 hours
NOEC	Zebra danio (Danio rerio)	> 100 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability Not inherently biodegradable. The product contains inorganic compounds which are not biodegradable. The other components of the product are slowly biodegradable.

Bioaccumulative potential No data available.

Mobility in soil No data available. Bentonite is almost insoluble and thus presents a low mobility in most soils.

Other adverse effects No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Not expected to be harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues/ unused products Material should be recycled if possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see Disposal instructions). Dispose of in accordance with local regulations. Can be landfilled, when in compliance with local regulations.

Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. REGULATORY INFORMATION

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes.

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US - Massachusetts RTK - Substance: Listed substance

Quartz (CAS 14808-60-7)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Quartz (CAS 14808-60-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Quartz (CAS 14808-60-7)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Quartz (CAS 14808-60-7) Listed: October 1, 1988

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue date May 15, 2015

Revision date March 3, 2022

Version # 03

Further information Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However, in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors

	affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. MANUFACTURER DISCLAIMER: The information given within this SDS is correct to the best of our knowledge, information and belief at the date of its revision and publication. However, the manufacturer makes no representation, warranty or guarantee as to its accuracy, reliability or completeness, nor assumes any liability for its use. It is the user's responsibility to confirm in advance that the information is current, applicable and suitable to their circumstances for each particular use. No representative of ours has authority to waive this provision. Please call for document accuracy if the revision date has exceeded 3 years.
Revision Information	Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Regulatory Information: United States HazReg Data: North America Hazards Identification Revision 3: Updated business location.