Safety Data Sheet

1. IDENTIFICATION

Product Identifier	**PETROSET II™**
Other means of identification	
Synonyms	None
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	PETROSET II™ is an organophilic solidifier which will solidify most non-aqueous liquids, such as oils and other hydrocarbons. Under certain applications, may be used as a rheology modifier to increase viscosity for improved suspension of solids and emulsion stability.
Recommended Restrictions	Industrial applications.

2. HAZARD(S) IDENTIFICATION

Physical hazards	Not classified.
Health hazards	Breathing crystalline silica can cause lung disease, including silicosis and lung cancer.
Environmental hazards	Toxic to aquatic life.
OSHA defined hazards	Carcinogenicity – Category 1A - H350 Specific Target Organ Toxicity (Repeated Exposure) – Category 1 - H372 Acute Aquatic Toxicity – Category 2 - H401.
Label elements	
Pictograms	
Signal words	Danger

Hazard statement		
	H350	May cause cancer.
	H372	Causes damage to organs through prolonged or repeated exposure.
	H401	Toxic to aquatic life.
Prevention	P201	Obtain special instructions before use
	P202	Do not handle until all safety precautions have been read and understood P260 - Do not breathe dust/fume/gas/mist/vapors/spray

	P264	Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product
	P273	Avoid release to the environment
	P280	Wear protective gloves/protective clothing/eye protection/face protection
Response	P308 + P313	If exposed or concerned: Get medical advice/attention
	P314	Get medical attention/advice if you feel unwell
Storage	P405	Store locked up
Disposal	P501	Dispose of contents/container in accordance with local/regional/national/international regulations
Hazard(s) not otherwise	None known	

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Substances	CAS Number	Percent (w/w)	GHS Classification - US
Crystalline silica, quartz	14808-60-7	1 - 5%	Carc. 1A (H350) STOT RE 1 (H372)
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	0.1 - 1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Acute 1 (H400)

4. FIRST-AID MEASURES

Inhalation	If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Ingestion	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.
Most important symptoms/effects, acute and delayed	Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
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.

4. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water fog, carbon dioxide, foam, dry chemical.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Decomposition in fire may produce harmful gases.
Special protective equipment and precautions for firefighters	Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency	Use only competent persons for cleanup. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Use appropriate protective equipment.
Environmental precautions	Prevent from entering sewers, waterways, or low areas.
Methods and material for containment and cleaning up	Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal. Cover powder spill with plastic sheet or tarp to minimize spreading.

7. HANDLING AND STORAGE

Precautions for safe handling	Do not breathe dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation. Use appropriate protective equipment. This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet. Avoid contact with eyes, skin, or clothing.
Conditions for safe storage, including any incompatibilities	Product has a shelf life of 24 months. Store in a cool, dry location.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Crystalline silica, quartz	14808-60-7	TWA: 50 µg/m^3	TWA: 0.025 mg/m^3
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable	Not applicable

Personal Protective Equipment	If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.
Respiratory Protection	If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Dust/mist respirator. (N95, P2/P3)
Hand Protection	Use gloves which are suitable for the chemicals present in this product as well as other environmental factors in the workplace.
Skin Protection	Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.
Eye Protection	Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles, Face-shield.
Other Precautions	None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State:	Powder	**Color:**	Tan
Odor:	Mild	**Odor Threshold:**	No information available

Property Remarks/ Method	Values
pH	No data available
Freezing Point / Range	No data available
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	No data available
Flammability (solid, gas)	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
Evaporation rate	No data available
Vapor Pressure	No data available

Vapor Density	No data available
Specific Gravity	1.6
Water Solubility	Insoluble
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not expected to be reactive.
Chemical stability	Stable.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	None anticipated.
Incompatible materials	Strong oxidizers. Strong acids. Strong alkalis.
Hazards and decomposition products	Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principle Route of Exposure	Eye or skin contact, inhalation. Ingestion

Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation	Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A). Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).
Eye Contact	May cause mechanical irritation to eye
Skin Contact	May cause mild skin irritation.
Ingestion	None known.

Chronic Effects

Carcinogenicity

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

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 can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Toxicity data

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Crystalline silica, quartz	14808-60-7	15000 mg/kg (human)	No data available	No data available
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	2000 mg/kg (Rat) 5000 mg/kg (Rat)	2000 mg/kg (Rabbit) (similar substance)	180 mg/L (Rat) 1h (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Crystalline silica, quartz	14808-60-7	Non-irritating to the skin
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Causes moderate skin irritation. (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Crystalline silica, quartz	14808-60-7	Non-irritating to the eye
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Causes moderate eye irritation (Rabbit)

Substances	CAS Number	Skin Sensitization
Crystalline silica, quartz	14808-60-7	No information available.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Crystalline silica, quartz	14808-60-7	No information available
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No information available

Substances	CAS Number	Mutagenic Effects
Crystalline silica, quartz	14808-60-7	Not regarded as mutagenic.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Crystalline silica, quartz	14808-60-7	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No information available

Substances	CAS Number	Reproductive toxicity
Crystalline silica, quartz	14808-60-7	No information available
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)

Substances	CAS Number	STOT - single exposure
Crystalline silica, quartz	14808-60-7	No significant toxicity observed in animal studies at concentration requiring classification.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No information available

Substances	CAS Number	STOT - repeated exposure
Crystalline silica, quartz	14808-60-7	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Crystalline silica, quartz	14808-60-7	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity Harmful to aquatic life.

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Micro organisms	Toxicity to Invertebrates
Crystalline silica, quartz	14808-60-7	EC50 (72 h) =440 mg/L (Selenastrum capricornutum) (similar substance)	LL0 (96 h) =10000 mg/L (Danio rerio) (similar substance)	No information available	LL50 (24 h) >10000 mg/L (Daphnia magna)(similar substance)
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	ErC50 (72h) 0.12 mg/L (Selenastrum capricornutum) EC50 (72h) 0.05 mg/L (Pseudokirchneriella subcapitata)	LC50 (96h) > 1000 mg/L (Brachydanio rerio)	No information available	EC50 (48h) 50 mg/L (Daphnia magna) EC50 (48h) 35.2 mg/L (Daphnia magna) EC50 (48h) 10 mg/L (Daphnia magna)

Persistence and degradability Crystaline silica, quartz: The methods for determining biodegradability are not applicable to inorganic substances. Bis(hydrogenated tallow alkyl) methylamines: Readily biodegradable (100% @ 28d)

Bioaccumulative potential No information available

Mobility in soil No information available

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods Disposal should be made in accordance with federal, state, and local regulations.

Contaminated Packaging Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

DOT Not restricted.

TDG Not restricted.

IATA/ICAO Not restricted.

IMDG/IMO Not restricted.

Transport in bulk according to Annex 2.2 of MARPOL 73/78 and the IBC Code Not applicable.

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Crystalline silica, quartz	14808-60-7	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Crystalline silica, quartz	14808-60-7	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

EPA SARA (311,312) Hazard Class Chronic Health Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Crystalline silica, quartz	14808-60-7	Not applicable	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Crystalline silica, quartz	14808-60-7	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

EPA RCRA Hazardous Waste Classification If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

Substances	CAS Number	California Proposition 65
Crystalline silica, quartz	14808-60-7	carcinogen
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Crystalline silica, quartz	14808-60-7	Carcinogen Extraordinarily hazardous	1660	Present
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable	Not applicable	Not applicable

NFPA Ratings: Health 1, Flammability 0, Reactivity 0
HMIS Ratings: Health 1*, Flammability 0, Reactivity 0

Canadian Regulations

Canadian Domestic Substances List (DSL) All components listed on inventory or are exempt.

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

Issue date	August 3, 2020
Revision date	March 10,2022
Version #	04
Further information	For additional information on the use of this product, contact Fluid Tech LLC.
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	SDS sections updated: **Rev 1** 12 Ecological Information, 13 Disposal Considerations. **Rev 2** 14 Transport Information and 15 Regulatory Information. **Rev 3** Contact information. **Rev 4** Addition of abbreviations and acronym information.

Key or legend to abbreviations and acronyms used in the safety data sheet

ADR	The European Agreement concerning the International Carriage of Dangerous Goods by Road AS/NZS 1715 - New Zeland Standard on Selection, use and maintenance of respiratory protective equipment bw – body weight
C	Celsius
CAS	Chemical Abstracts Service
CLP	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures
EC	European Commission
EC10	Effective Concentration 10% EC50 – Effective Concentration 50% EEC – European Economic Community
EN 149	European standard on filtering halfmasks to protect against particles
ErC50	Effective Concentration growth rate 50%
EN 374	European standard on Protective gloves against chemicals and micro-organisms FFP - Filtering Facepieces
H	Hour
IATA/ICAO	International Air Transport Association / International Civil Aviation Organization
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk LC50 – Lethal Concentration 50%
IMDG/IMO	International Maritime Dangerous Goods / International Maritime Organization
LD50	Lethal Dose 50% LL0 – Lethal Loading 0% LL50 – Lethal Loading 50%
MAK	Maximum Workplace Concentration

MARPOL	International Convention for the Prevention of Pollution from Ships mg/kg – milligram/kilogram
mg/L	Milligram/liter
mg/m^3	Milligram/cubic meter mm - millimeter
mmHg	Millimeter mercury
NIOSH	National Institute for Occupational Safety and Health NOEC – No Observed Effect Concentration
NDS	Najwyisze dopuszczalne stkienie na stanowisku pracy
NDS	OEL-TWA [Poland najwyisze dopuszczalne stkienie na stanowisku pracy]
NTP	National Toxicology Program OEL – Occupational Exposure Limit
PBT	Persistent Bioaccumulative and Toxic PC – Chemical Product category
PEL	Permissible Exposure Limit ppm – parts per million
PROC	Process category
REACH	REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorization and Restriction of Chemicals R/H-phrases - Risk/Hazard-phrases
RID	The European Agreement concerning the International Carriage of Dangerous Goods by Rail
STEL	Short Term Exposure Limit SU – Sector of Use category
SZW	Netherlands Ministry of Social Affairs and Employment
TWA	Time-Weighted Average
UK	United Kingdom
UN	United Nations
VLA-EC	Short-time excursion limits [Spain valores límite ambientales para la exposición de corta duración]
VLA-ED	Time-weighted average values for a whole work shift [Spain valores límite ambientales para la exposición diaria]
VOC	Volatile Organic Carbon
vPvB	Very Persistent and very Bioaccumulative
w/w	Weight/weight