

SDS no. PID1588  
Version 8  
Revision date 31/Jan/2018  
Supersedes date 09/Mar/2016



## Safety Data Sheet TANNATHIN\*

### 1. Identification of the Substance/Preparation and of the Company/Undertaking

#### 1.1 Product identifier

Product name TANNATHIN\*  
Product code PID1588

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Drilling fluid additive. Dispersant.  
Uses advised against Consumer use

#### 1.3 Details of the supplier of the safety data sheet

Supplier  
M-I L.L.C.  
P.O.Box 42842  
Houston, TX 77242  
www.miswaco.slb.com  
Telephone: 1 281-561-1511

M-I SWACO, A Schlumberger Company  
200 - 125, 9th Avenue SE  
Calgary, Alberta T2G 0P6, Canada  
Telephone: 1-780-962-8221

E-mail address SDS@slb.com

Prepared by  
Global Regulatory Compliance - Chemicals (GRC - Chemicals)

#### 1.4 Emergency Telephone Number

Emergency telephone (24 Hour) Asia Pacific +65 3158 1074, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, USA +1 281 561 1600, Canada +1 800 579 7421, Argentina: +54 11 5984 3690, Brazil : 0800-720-8000/0800-777-2323 (WGRA)

### 2. Hazards Identification

#### 2.1 Classification of the substance or mixture

##### GHS - Classification

##### Health hazards

|  |             |
|--|-------------|
| Carcinogenicity                                    | Category 1A |
| Specific target organ toxicity - Repeated exposure | Category 2  |

**Environmental hazards** Not classified

**Physical Hazards**

Combustible dust

**2.2 Label elements**



**Signal word**

DANGER

**Hazard statements**

H350i - May cause cancer by inhalation

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

May form combustible dust concentrations in air

**Precautionary statements**

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

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P281 - Use personal protective equipment as required

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P314 - Get medical advice/attention if you feel unwell

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

P240 - Ground/bond container and receiving equipment

P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment

P243 - Take precautionary measures against static discharge

**Hazards not otherwise classified**

None known

**Unknown acute toxicity** Not applicable.

**3. Composition/information on Ingredients**

**3.1 Substances**

| Chemical Name                 | CAS No     | Weight-% |
|-------------------------------|------------|----------|
| Humic acid, sodium salt       | 1415-93-6  | 60-100   |
| Crystalline silica (impurity) | 14808-60-7 | <3       |

**3.2 Mixtures**

Not applicable

**Comments**

The exact percentage (concentration) of composition has been withheld as a trade secret

## 4. First Aid Measures

### 4.1 First aid measures

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Move to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Get medical attention immediately if symptoms occur.  |
| <b>Ingestion</b>    | Rinse mouth. If swallowed, call a poison control center or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur. |
| <b>Skin contact</b> | Wash skin thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if irritation persists.  |
| <b>Eye Contact</b>  | Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses, if worn. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.                                   |

### 4.2. Most important symptoms and effects, both acute and delayed

**General advice** The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

#### **Symptoms**

**Inhalation** Please see Section 11. Toxicological Information for further information.

**Ingestion** Please see Section 11. Toxicological Information for further information.

**Skin contact** Please see Section 11. Toxicological Information for further information.

**Eye contact** Please see Section 11. Toxicological Information for further information.

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician** Treat symptomatically

## 5. Fire-Fighting Measures

### 5.1 Extinguishing media

#### **Suitable extinguishing media**

Water Fog, Alcohol Foam, CO<sub>2</sub>, Dry Chemical.

#### **Extinguishing media which must not be used for safety reasons**

None known.

### 5.2. Special hazards arising from the substance or mixture

#### **Unusual fire and explosion hazards**

Dusts or fumes may form explosive mixtures in air.

#### **Hazardous combustion products**

Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke), Silicon oxide, Nitrogen oxides (NO<sub>x</sub>), Ammonia.

### 5.3 Advice for firefighters

#### **Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

## 6. Accidental Release Measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Avoid contact with the skin and the eyes. Avoid breathing dust; if exposed to high dust concentration, leave area immediately. Evacuate personnel to safe areas. Prevent further leakage or spillage if safe to do so. Avoid dust formation. Suspended dust may present a dust explosion hazard.

### 6.2 Environmental precautions

Do not allow material to contaminate ground water system.

#### **Environmental exposure controls**

No information available.

### 6.3 Methods and material for containment and cleaning up

#### **Methods for containment**

Cover powder spill with plastic sheet or tarp to minimize spreading.

#### **Methods for cleaning up**

Shovel into suitable container for disposal. Avoid dust formation. Powdered material may form explosive dust-air mixtures. Use non-sparking tools and equipment. Take precautionary measures against static discharges.

### 6.4 Reference to other sections

No information available.

## 7. Handling and Storage

### 7.1 Precautions for safe handling

#### **Handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid dust formation. If spilled, take caution, as material can cause surfaces to become very slippery. Take precautionary measures against static discharges. Fine dust dispersed in air may ignite. All equipment used when handling the product must be grounded.

### 7.2 Conditions for safe storage, including any incompatibilities

**Technical measures/precautions**      Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

**Storage precautions**                      Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Protect from moisture Avoid contact with: Strong oxidizing agents

**Packaging materials**                      Use specially constructed containers only.

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

| Chemical Name                 | ACGIH TLV               | OSHA PEL                                     | Argentina - Occupational Exposure Limits - TWAs (CMPs) | Brazil - Occupational Exposure Limits - TWAs (LTs) | Mexico - Occupational Exposure Limits - TWAs (LMPE-PPTs) |
|-------------------------------|-------------------------|--|--|--|--|
| Humic acid, sodium salt       | Not determined          | Not determined                               | Not determined   | Not determined                                     | Not determined   |
| Crystalline silica (impurity) | 0.025 mg/m <sup>3</sup> | 50 µg/m <sup>3</sup> TWA respirable fraction | 0.05 mg/m <sup>3</sup> TWA                             | Not determined                                     | 0.1 mg/m <sup>3</sup> TWA VLE-PPT (respirable fraction)  |

Crystalline silica (impurity)

OSHA - Final PELs - Table Z-3 Mineral Dusts

(250)/(%SiO<sub>2</sub> + 5) mppcf TWA, respirable fraction; (10)/(%SiO<sub>2</sub> + 2) mg/m<sup>3</sup> TWA, respirable fraction

**IDLH (Immediately Dangerous to Life or Health)**

This product contains substance(s) classified as Immediately Dangerous to Life or Health (IDLH) by the US National Institute for Occupational Safety and Health (NIOSH). The purpose of establishing an IDLH value is to ensure that the worker can escape from a given contaminated environment in the event of failure of the most protective respiratory protection equipment. In the event of failure of respiratory protection equipment every effort should be made to exit immediately.

| Chemical Name                               | IDLH (Immediately Dangerous to Life or Health) |
|---|--|
| Humic acid, sodium salt<br>1415-93-6        | Not determined                                 |
| Crystalline silica (impurity)<br>14808-60-7 | 50 mg/m <sup>3</sup> IDLH (respirable dust)    |

**8.2 Exposure controls**

A risk assessment is recommended to be performed by a qualified and trained personnel to analyze the worksite and recommends the appropriate controls such as engineering controls, work practice controls, and administrative controls as primary means of reducing employee exposure. When there is a remaining hazards after applying the primary controls, Personal Protective Equipment (PPE) must be used.

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

**Engineering Controls**

Keep airborne concentrations below exposure limits. Ensure adequate ventilation. Mechanical ventilation or local exhaust ventilation is required. Apply technical measures to comply with the occupational exposure limits.

**Personal protective equipment**

**Eye protection**

Tightly fitting safety goggles.

**Hand protection**

Wear gloves according to EN 374 to protect against skin effects from powders Nitrile Neoprene Frequent change is advisable

**Respiratory Protection**

All respiratory protection equipment should be used within a comprehensive respiratory protection program that meets the requirements of 29 CFR 1910.134 (U.S. OSHA Respiratory Protection Standard) or local equivalent. If exposed to airborne mist/aerosol of this product, use an organic vapor cartridge with a P-95 pre-filter attached. In work environments containing oil mist/aerosol, use an organic vapor cartridge with a P-95 pre-filter attached. If exposed to vapors from this product, use a NIOSH/MSHA-approved respirator with an organic vapor cartridge.

**Skin and body protection**

Wear suitable protective clothing, Eye wash and emergency shower must be available at the work place.

**Hygiene Measures**

Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.

**9. Physical and Chemical Properties**

**9.1 Information on basic physical and chemical properties**

|                       |                |
|-----------------------|----------------|
| <b>Physical state</b> | Solid          |
| <b>Appearance</b>     | Powder Dust    |
| <b>Color</b>          | Black          |
| <b>Odor</b>           | Mild           |
| <b>Odor threshold</b> | Not applicable |

| <u>Property</u>              | <u>Values</u>                                  | <u>Remarks</u> |
|------------------------------|--|----------------|
| pH                           |  |                |
| pH @ dilution                | 4-5  | 1% solution    |
| Melting / freezing point     | No information available                       |                |
| Boiling point/range          | No information available                       |                |
| Flash point                  | 153.9 °C / 309 °F                              | PMCC           |
| Evaporation rate (BuAc =1)   | No information available                       |                |
| Flammability (solid, gas)    | Not applicable                                 |                |
| Flammability Limit in Air    |  |                |
| Upper flammability limit     | No information available                       |                |
| Lower flammability limit     | No information available                       |                |
| Vapor pressure               | No information available                       |                |
| Vapor density                | No information available                       |                |
| Specific gravity             | 1.5 - 1.7                                      |                |
| Bulk density                 | 833 kg/m <sup>3</sup> (52 lb/ft <sup>3</sup> ) |                |
| Water solubility             | Insoluble in water                             |                |
| Solubility in other solvents | No information available                       |                |
| Autoignition temperature     | No information available                       |                |
| Decomposition temperature    | No information available                       |                |
| Kinematic viscosity          | No information available                       |                |
| Dynamic viscosity            | No information available                       |                |
| log Pow                      | No information available                       |                |
| Explosive properties         | May form explosive mixtures with air           |                |
| Oxidizing properties         | No information available                       |                |

#### 9.2 Other information

|                  |                          |
|------------------|--------------------------|
| Pour point       | No information available |
| Molecular weight | No information available |
| VOC content(%)   | No information available |
| Density          | No information available |

#### Comments

The data listed above are typical physical and chemical properties and should not be construed as product specification.

## **10. Stability and Reactivity**

### 10.1 Reactivity

Dust may form explosive mixture in air.

### 10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

### 10.3 Possibility of Hazardous Reactions

#### **Hazardous polymerization**

Hazardous polymerization does not occur.

### 10.4 Conditions to avoid

Protect from moisture. Avoid dust formation. Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

See Section 5.2.

## 11. Toxicological Information

### 11.1 Information on toxicological effects

**Acute toxicity**

**Product information**

This product contains a small quantity of quartz, crystalline silica. Prolonged and repeated exposure to concentrations of crystalline silica exceeding the workplace exposure limit (WEL) may lead to chronic lung disease such as silicosis.

**Inhalation**

May cause respiratory irritation. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Harmful: danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation.

**Eye contact**

May cause irritation.

**Skin contact**

Prolonged contact may cause redness and irritation.

**Ingestion**

Ingestion may cause stomach discomfort.

**Toxicology data for the components**

| Chemical Name                 | LD50 Oral           | LD50 Dermal       | LC50 Inhalation   |
|-------------------------------|---------------------|-------------------|-------------------|
| Humic acid, sodium salt       | No data available   | No data available | No data available |
| Crystalline silica (impurity) | = 500 mg/kg ( Rat ) | No data available | No data available |

| Chemical Name                 | IARC Group 1 or 2  | ACGIH - Carcinogens           | OSHA listed carcinogens | NTP                    |
|-------------------------------|--|-------------------------------|-------------------------|------------------------|
| Humic acid, sodium salt       | No data available  | No data available             | No data available       | No data available      |
| Crystalline silica (impurity) | Group 1; Monograph 100C [2012] Monograph 100C [2012] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources); Monograph 68 [1997] Group 1; Monograph 68 [1997] | A2 Suspected Human Carcinogen | Present                 | Known Human Carcinogen |

**Sensitization**

Not classified.

**Mutagenic effects**

This product does not contain any known or suspected mutagens.

**Carcinogenicity**

Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled.

**Reproductive toxicity**

This product does not contain any known or suspected reproductive hazards.

**Developmental toxicity**

Not known to cause birth defects or have a deleterious effect on a developing fetus.

**Routes of exposure**

Inhalation.

**Routes of entry**

Inhalation.

**Specific target organ toxicity - Single exposure**

Not classified

**Specific target organ toxicity - Repeated exposure**

Category 2.

**Target organ effects** Lungs. Respiratory system.  
**Aspiration hazard** Not classified.

## 12. Ecological Information

### 12.1 Toxicity

#### Toxicity to algae

This product is not considered toxic to algae.

#### Toxicity to fish

This product is not considered toxic to fish.

#### Toxicity to daphnia and other aquatic invertebrates

This product is not considered toxic to invertebrates.

| Chemical Name                 | Toxicity to fish         | Toxicity to algae        | Toxicity to daphnia and other aquatic invertebrates |
|-------------------------------|--------------------------|--------------------------|---|
| Humic acid, sodium salt       | No information available | No information available | No information available                            |
| Crystalline silica (impurity) | No information available | No information available | No information available                            |

### 12.2 Persistence and degradability

No product level data available.

### 12.3 Bioaccumulative potential

No product level data available.

### 12.4 Mobility

Insoluble in water.

### 12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)  
This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

### 12.6 Other adverse effects.

None known.

## 13. Disposal Considerations

### 13.1 Waste treatment methods

**Disposal Method** Disposal should be made in accordance with federal, state and local regulations.  
**Contaminated packaging** Empty containers should be taken for local recycling, recovery or waste disposal.

## 14. Transport information

### 14.1. UN number UN No. (DOT)

Not regulated



|                                    |               |
|------------------------------------|---------------|
| <b>UN No. (MT/ANTT)</b>            | Not regulated |
| <b>UN No. (TDG)</b>                | Not regulated |
| <b>UN/ID No. (ADR/RID/ADN/ADG)</b> | Not regulated |
| <b>UN No. (IMDG/ANTAQ)</b>         | Not regulated |
| <b>UN No. (ICAO/ANAC)</b>          | Not regulated |

**14.2. UN proper shipping name**

The product is not covered by international regulation on the transport of dangerous goods

**14.3 Hazard class(es)**

|  |               |
|--|---------------|
| <b>DOT Hazard class</b>                | Not regulated |
| <b>ANTT Hazard class</b>               | Not regulated |
| <b>TDG Hazard class</b>                | Not regulated |
| <b>ADR/RID/ADN/ADG Hazard class</b>    | Not regulated |
| <b>IMDG/ANTAQ Hazard class</b>         | Not regulated |
| <b>ICAO/ANAC Hazard class/division</b> | Not regulated |

**14.4 Packing group**

|                                      |               |
|--------------------------------------|---------------|
| <b>DOT/ANTT Packing group</b>        | Not regulated |
| <b>ANTT Packing group</b>            | Not regulated |
| <b>TDG Packing group</b>             | Not regulated |
| <b>ADR/RID/ADN/ADG Packing group</b> | Not regulated |
| <b>IMDG/ANTAQ Packing group</b>      | Not regulated |
| <b>ICAO/ANAC Packing group</b>       | Not regulated |

**14.5 Environmental hazard**

No

**14.6 Special precautions**

Not applicable

**14.7 Transport in bulk according to Annex I/II of MARPOL 73/78 and the IBC Code**

Please contact MISDS@slb.com for info regarding transport in Bulk.

**15. Regulatory Information**

**International inventories**

|                            |                 |
|----------------------------|-----------------|
| <b>USA (TSCA)</b>          | Complies        |
| <b>Canada (DSL)</b>        | Complies        |
| <b>Philippines (PICCS)</b> | Complies        |
| <b>Japan (ENCS)</b>        | Does not comply |
| <b>China (IECSC)</b>       | Complies        |
| <b>Australia (AICS)</b>    | Complies        |
| <b>Korean (KECL)</b>       | Complies        |
| <b>New Zealand (NZIoC)</b> | Complies        |

**Europe - REACH**

All products supplied from the European Economic Area (EEA) are compliant with the REACH Regulation EC 1907/2006. For products supplied from the EEA, Schlumberger and/or its suppliers have pre-registered and is registering all of the substances that it and/or its suppliers manufactures in or imports into the EEA that are subject to Title II of the REACH Regulation. All products supplied from outside the EEA are subject to REACH only if imported into the EEA. The importer of the products must comply with REACH for each imported substance. Contact REACH@slb.com for REACH information.

**U.S. Federal and State Regulations**

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

| Chemical Name                 | SARA 302 / TPQs | SARA 313 | CERCLA RQ |
|-------------------------------|-----------------|----------|-----------|
| Humic acid, sodium salt       | N/A             | N/A      | N/A       |
| Crystalline silica (impurity) | N/A             | N/A      | N/A       |

**California Proposition 65**

**WARNING**



This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

| Chemical Name                               | California Proposition 65 |
|---|---------------------------|
| Crystalline silica (impurity)<br>14808-60-7 | Carcinogen                |

**16. Other Information**

**Supersedes date** 09/Mar/2016

**Revision date** 31/Jan/2018

**Version** 8

**This SDS has been revised in the following section(s)** All sections. Updated according to GHS/CLP.

**HMIS classification**

Health 1\*

Flammability 1

Physical hazard 0

PPE E

N/A - Not Applicable, N/D - Not Determined.

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