



Safety Data Sheet ASPHASOL* SUPREME

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

1.1 Product identifier

Product name ASPHASOL* SUPREME
Product code PID2443

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

Recommended Use Drilling fluid additive. Viscosifier.
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

Schlumberger Canada, Ltd.
200, 125 - 9th Avenue SE
Calgary, Alberta T2G 0P6, Canada
Telephone: 1-613-992-4624

E-mail address sdsmi@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

H232 - May form combustible dust concentrations in air

Precautionary Statements

P201 - Obtain special instructions before use

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P281 - Use personal protective equipment as required

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

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

P240 - Ground/bond container and receiving equipment

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

P243 - Take precautionary measures against static discharge

P314 - Get medical advice/attention if you feel unwell

P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified

None known

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

3. Composition/information on Ingredients

3.1 Substances

| Chemical Name | CAS No | Weight-% |
|--------------------------------|-------------|----------|
| Aromatic amine treated mineral | Proprietary | 80 - 100 |
| Crystalline silica (impurity) | 14808-60-7 | < 3 |

3.2 Mixtures

Not applicable

Comments

Proprietary component(s) in section 3 of this SDS does not/do not trigger application of trade secret exemption under Hazardous Materials Information Review Act (HMIRA). The proprietary component in this product contributes to combustible dust classification.

Crystalline silica is the most widely occurring of all minerals. The most common form of silica is sand. The International Agency for Research on Cancer (IARC) has designated crystalline silica in the form of quartz or cristobalite a Group 1 (carcinogenic to humans). This designation was based on an increased risk of lung cancer among crystalline silica exposed workers. IARC did note that carcinogenicity of crystalline silica in humans was not detected in all industrial circumstances studied. Further, carcinogenicity of crystalline silica may be dependent on inherent characteristics of the crystalline silica or external factors affecting its biological activity or distribution of polymorphs. (IARC Vol. 68, 1997, p. 41). The National Toxicology Program (NTP) classifies crystalline silica as "reasonably anticipated to cause cancer in humans" (6th Annual Report on Carcinogens, 1991). Long term inhalation of crystalline silica can also result in the lung disease, silicosis. Symptoms of this disease include coughing and shortness of breath. (NJ HSFS, January 1996) Percentages (concentrations) represented as a range are due to batch-to-batch variability.

4. First Aid Measures

4.1 First aid measures

| | |
|---------------------|---|
| Inhalation | Move to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Get medical attention immediately if symptoms occur. |
| Ingestion | Call a physician or Poison Control Center. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention. |
| Skin contact | Wash skin thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if irritation persists. |
| Eye Contact | 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

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, CO₂, 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

Harmful organic chemical fumes, Carbon oxides (COx), Nitrogen oxides (NOx).

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. 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. Avoid breathing dust; if exposed to high dust concentration, leave area immediately.

6.2 Environmental precautions

Do not allow material to contaminate ground water system.

Environmental exposure controls

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

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

Sweep up and shovel into suitable containers for disposal. Prevent dust cloud. Powdered material may form explosive dust-air mixtures. Take precautionary measures against static discharges. Use non-sparking tools and equipment.

6.4 Reference to other sections

See section 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust; if exposed to high dust concentration, leave area immediately. Avoid contact with skin, eyes and clothing. Take precautionary measures against static discharges. Fine dust dispersed in air may ignite.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation.

Storage precautions Keep container/package tightly closed and in a well-ventilated place. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking. Avoid contact with water and moist air - product is hygroscopic. Do not store and transport with oxidizers.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Component Information

| 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) |
|--------------------------------|-------------------------|--|--|--|--|
| Aromatic amine treated mineral | Not determined | Not determined | Not determined | Not determined | Not determined |
| Crystalline silica (impurity) | 0.025 mg/m ³ | 50 µg/m ³ TWA respirable fraction | 0.05 mg/m ³ TWA | Not determined | 0.1 mg/m ³ TWA VLE-PPT (respirable fraction) |

Crystalline silica (impurity)

OSHA - Final PELs - Table Z-3 Mineral Dusts

(250)/(%SiO₂ + 5) mppcf TWA, respirable fraction; (10)/(%SiO₂ + 2) mg/m³ 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) |
|---|--|
| Aromatic amine treated mineral | Not determined |
| Crystalline silica (impurity) 14808-60-7 | 50 mg/m ³ 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

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye protection

Tightly fitting safety goggles.

Hand protection

Wear chemical resistant gloves such as nitrile or neoprene.

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 particles of this product use at least a NIOSH-approved N95 half-mask disposable or re-useable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or re-useable particulate respirator.

Skin and body protection

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

Hygiene Measures

Wash hands before breaks and immediately after handling the product, Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

| | |
|----------------|----------------|
| Physical state | Solid |
| Appearance | Opaque |
| Color | Brown - Black |
| Odor | Mild |
| Odor threshold | Not applicable |

| <u>Property</u> | <u>Values</u> | <u>Remarks</u> |
|------------------------------|--|----------------|
| pH | No information available | |
| pH @ dilution | 8.5@2% | |
| Melting / freezing point | No information available | |
| Boiling point/range | No information available | |
| Flash point | No information available | |
| Evaporation rate (BuAc =1) | Not applicable | |
| 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 | 1.40 - 1.65 | |
| Bulk density | No information available | |
| Water solubility | Moderately soluble | |
| Solubility in other solvents | No information available | |
| Autoignition temperature | 190 °C / 374 °F | |
| Decomposition temperature | No information available | |
| Kinematic viscosity | No information available | |
| Dynamic viscosity | No information available | |
| log Pow | No information available | |
| Explosive properties | Suspended dust may present a dust explosion hazard | |
| 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

Not known.

10.4 Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid contact with water and moist air - product is hygroscopic.

10.5 Incompatible materials

Oxidizing agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Product information

IARC Monographs, Vol. 68, 1997, concludes that there is sufficient evidence that inhaled crystalline silica in the form of quartz or cristobalite from occupational sources causes cancer in humans. IARC Classification Group 1.

Inhalation

Inhalation of dust in high concentration may cause irritation of respiratory system. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Repeated or prolonged inhalation of crystalline silica dust can cause delayed lung injury, and other diseases, including silicosis and lung cancer.

Eye contact

Dust contact with the eyes can lead to mechanical irritation.

Skin contact

Repeated exposure may cause skin dryness or cracking.

Ingestion

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Toxicology data for the components

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------------------|---------------------|-------------------|-------------------|
| Aromatic amine treated mineral | 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 |
|--------------------------------|--|-------------------------------|-------------------------|------------------------|
| Aromatic amine treated mineral | 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

No evidence of mutagenic properties.

Carcinogenicity

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

Reproductive toxicity

No evidence of toxicity to reproduction.

Developmental toxicity

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

Routes of exposure

Skin contact. Inhalation. Eye contact.

| | |
|---|-----------------|
| Routes of entry | Inhalation. |
| Specific target organ toxicity - Single exposure | Not classified |
| Specific target organ toxicity - Repeated exposure | Category 2. |
| Target organ effects | Lungs. |
| Aspiration hazard | Not classified. |

12. Ecological Information

12.1 Toxicity

Toxicity to algae

See component information below.

Toxicity to fish

See component information below.

Toxicity to daphnia and other aquatic invertebrates

See component information below.

| Chemical Name | Toxicity to fish | Toxicity to algae | Toxicity to daphnia and other aquatic invertebrates |
|--------------------------------|--|--------------------------|---|
| Aromatic amine treated mineral | No information available | No information available | No information available |
| Crystalline silica (impurity) | LC50 Danio rerio (zebra fish) : > 10000 mg/l 96h | EC50: > 1000 mg/l 72h | LC50 Daphnia magna (Water flea): > 10000 mg/l 24h |

12.2 Persistence and degradability

No product level data available.

12.3 Bioaccumulative potential

No product level data available.

12.4 Mobility

Soluble 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 |
| UN No. (MT/ANTT) | Not regulated |
| UN No. (TDG) | Not regulated |
| UN/ID No. (ADR/RID/ADN/ADG) | Not regulated |
| UN No. (IMDG/ANTAQ) | Not regulated |
| UN No. (ICAO/ANAC) | Not regulated |
| UN No. (DPC) | 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)

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

14.4 Packing group

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

14.5 Environmental hazard

No

14.6 Special precautions

Not applicable

15. Regulatory Information

International inventories

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

Europe - REACH

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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 |
|--------------------------------|-----------------|----------|-----------|
| Aromatic amine treated mineral | 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

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

Canadian Classification

This Safety Data Sheet has been prepared in compliance with the Hazardous Products Regulations.

16. Other Information

Supersedes date 29/Sep/2014

Revision date 26/Oct/2018

Version 8

This SDS has been revised in the following section(s) 9, 15, 16

HMIS classification

Health 1*
Flammability 1
Physical hazard 0
PPE E

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

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