




1. Identification

| | | | |
|--|--|-------------------------------|--|
| Product identifier | API Test Calibration Barite | | |
| Other means of identification | | | |
| CAS number | 7727-43-7 | | |
| Recommended use | Not available. | | |
| Recommended restrictions | None known. | | |
| Manufacturer/Importer/Supplier/Distributor information | | | |
| Manufacturer | | | |
| Company name | Oilfield Testing & Consulting, LLC | | |
| Address | 2010 Grandway Dr Katy, TX 77449 USA | | |
| Telephone | 281-579-1055 | | |
| Website | www.oftesting.com | | |
| Emergency phone number | Emergency | 1.866.519.4752/1 760 476 3962 | |
| Americas | 1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962 | | |

2. Hazard(s) identification

| | | |
|---|---|-------------|
| Physical hazards | Not classified. | |
| Health hazards | Carcinogenicity | Category 1A |
| | Specific target organ toxicity, repeated exposure | Category 2 |
| Environmental hazards | Not classified. | |
| OSHA defined hazards | Not classified. | |
| Label elements |  | |
| Signal word | Danger | |
| Hazard statement | May cause cancer. May cause damage to organs through prolonged or repeated exposure. | |
| Precautionary statement | | |
| Prevention | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wear protective gloves/protective clothing/eye protection/face protection. | |
| Response | If exposed or concerned: Get medical advice/attention. | |
| Storage | Store locked up. | |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. | |
| Hazard(s) not otherwise classified (HNOC) | None known. | |
| Supplemental information | None. | |

3. Composition/information on ingredients

Substances

| Chemical name | Common name and synonyms | CAS number | % |
|---------------|--------------------------|------------|-----|
| Barite | | 7727-43-7 | 100 |

Constituents

| Chemical name | Common name and synonyms | CAS number | % |
|----------------------------|--------------------------|------------|-------|
| QUARTZ (SiO ₂) | | 14808-60-7 | <= 10 |

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

Composition comments Occupational Exposure Limits for constituents are listed in Section 8.

4. First-aid measures

| | |
|---|---|
| Inhalation | Move to fresh air. If symptoms are experienced, remove source of contamination or move victim to fresh air. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Call a physician if symptoms develop or persist. |
| Skin contact | Get medical attention if irritation develops or persists. Wash affected area with mild soap and water. |
| Eye contact | Do not rub eyes. Flush eyes immediately with large amounts of water. Get medical attention if irritation develops or persists. Get medical attention if irritation develops and persists. |
| Ingestion | If ingestion of a large amount does occur, seek medical attention. No special measures required. |
| Most important symptoms/effects, acute and delayed | Dusts may irritate the respiratory tract, skin and eyes. Prolonged exposure may cause chronic effects. |
| 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 | IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. Fire-fighting measures

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| Suitable extinguishing media | Dry chemical, CO ₂ , water spray or regular foam. Use any media suitable for the surrounding fires. |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |
| Fire fighting equipment/instructions | Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | No unusual fire or explosion hazards noted. This material will not burn. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. 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 | <p>Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.</p> <p>Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.</p> <p>Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.</p> <p>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.</p> |
| Environmental precautions | Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

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|--------------------------------------|--|
| Precautions for safe handling | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. |
|--------------------------------------|--|

Conditions for safe storage, including any incompatibilities

Store locked up. No special restrictions on storage with other products. Store in tightly closed container. Store in a well-ventilated place. No special storage conditions required. Guard against dust accumulation of this material. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

| Material | Type | Value | Form |
|------------------------|------|----------|----------------------|
| Barite (CAS 7727-43-7) | PEL | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |

| Constituents | Type | Value | Form |
|--------------------------------|------|------------|------------------|
| QUARTZ (SIO2) (CAS 14808-60-7) | PEL | 0.05 mg/m3 | Respirable dust. |

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

| Constituents | Type | Value | Form |
|-------------------------|------|----------|----------------------|
| INERT OR NUISANCE DUSTS | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| | | 15 mppcf | Respirable fraction. |

| | | | |
|--------------------------------|-----|-----------|-------------|
| QUARTZ (SIO2) (CAS 14808-60-7) | TWA | 0.1 mg/m3 | Respirable. |
| | | 2.4 mppcf | Respirable. |

US. ACGIH Threshold Limit Values

| Material | Type | Value | Form |
|------------------------|------|---------|---------------------|
| Barite (CAS 7727-43-7) | TWA | 5 mg/m3 | Inhalable fraction. |

| Constituents | Type | Value | Form |
|--------------------------------|------|-------------|----------------------|
| QUARTZ (SIO2) (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Material | Type | Value | Form |
|------------------------|------|----------|-------------|
| Barite (CAS 7727-43-7) | TWA | 5 mg/m3 | Respirable. |
| | | 10 mg/m3 | Total |

| Constituents | Type | Value | Form |
|--------------------------------|------|------------|------------------|
| QUARTZ (SIO2) (CAS 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

If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn. 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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter. Applicable for industrial settings only.

| | |
|---------------------------------------|---|
| Skin protection | |
| Hand protection | Wear appropriate chemical resistant gloves. Applicable for industrial settings only. |
| Other | Use of an impervious apron is recommended. No special protective equipment required. Applicable for industrial settings only. |
| Respiratory protection | Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter. Applicable for industrial settings only. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General hygiene considerations | Observe any medical surveillance requirements. 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. Eye wash fountain is recommended. Use good industrial hygiene practices in handling this material. |

9. Physical and chemical properties

| | |
|---|---------------------------------|
| Appearance | Powder. |
| Physical state | Solid. |
| Form | Powder. |
| Color | White to tan. |
| Odor | None. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | 2876 °F (1580 °C) |
| Initial boiling point and boiling range | Not available. |
| Flash point | Non-flammable |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Non-explosive |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | < 0.0000001 kPa (77 °F (25 °C)) |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Insoluble |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | > 2912 °F (> 1600 °C) |
| Viscosity | Not available. |
| Other information | |
| Density | 4.49 g/cm3 estimated |
| Explosive properties | Not explosive. |
| Heat of combustion (NFPA 30B) | 0 kJ/g |
| Molecular formula | Ba.H2-O4-S |
| Molecular weight | 233.39 g/mol |
| Oxidizing properties | Not oxidizing. |
| Specific gravity | 4.49 |

10. Stability and reactivity

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|---|--|
| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Stable at normal conditions. |
| Possibility of hazardous reactions | Will not occur. |
| Conditions to avoid | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials. |
| Incompatible materials | None known. |
| Hazardous decomposition products | Upon decomposition, this product emits oxides of sulfur, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. |

11. Toxicological information

Information on likely routes of exposure

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|---------------------|--|
| Inhalation | Dust may irritate respiratory system. Prolonged inhalation may be harmful. |
| Skin contact | Dust or powder may irritate the skin. |
| Eye contact | Dust may irritate the eyes. |
| 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 Not known.

| Product | Species | Test Results |
|---|---|---------------|
| BARITE (CAS 7727-43-7) | | |
| <u>Acute</u> | | |
| Oral | | |
| LD50 | Rat | >= 5000 mg/kg |
| Skin corrosion/irritation | Prolonged skin contact may cause temporary irritation. | |
| Serious eye damage/eye irritation | This product may cause slight irritation to the eyes. | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | Not a respiratory sensitizer. | |
| Skin sensitization | According to the classification criteria of the European Union, the product is not considered as being a skin irritant. | |
| 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. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| QUARTZ (SIO2) (CAS 14808-60-7) | 1 Carcinogenic to humans. | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052) | | |
| QUARTZ (SIO2) (CAS 14808-60-7) | Cancer | |
| US. National Toxicology Program (NTP) Report on Carcinogens | | |
| QUARTZ (SIO2) (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 | May cause damage to organs through prolonged or repeated exposure. | |
| Aspiration hazard | Not an aspiration hazard. | |
| Chronic effects | May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Overexposure to dusts may result in pneumoconiosis, a lung disease due to permanent deposition of substantial amounts of particulate matter in the lungs. | |

12. Ecological information

Ecotoxicity 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.

| Product | Species | | Test Results |
|-------------------------------|---|----------------------------------|------------------------------|
| Barite (CAS 7727-43-7) | | | |
| Aquatic | | | |
| Crustacea | EC50 | Tubificid worm (Tubifex tubifex) | 28.61 - 38.03 mg/l, 48 hours |
| Fish | LC50 | Fish | 8 - 19 g/l, 96 Hours |
| Persistence and degradability | No data is available on the degradability of this product. | | |
| Bioaccumulative potential | No data available. | | |
| Mobility in soil | No data available. | | |
| 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. | | |

13. Disposal considerations

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|--|---|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations. Material should be recycled if possible. |
| 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 | Dispose of in accordance with local regulations. 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). |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

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

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|---|--|
| US federal regulations | OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119. 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/SARA Hazardous Substances - Not applicable. |
| TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) | Not regulated. |
| CERCLA Hazardous Substance List (40 CFR 302.4) | Not listed. |
| SARA 304 Emergency release notification | Not regulated. |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052) | QUARTZ (SIO2) (CAS 14808-60-7) Cancer lung effects immune system effects kidney effects |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No (Exempt)

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

California Proposition 65



WARNING: This product can expose you to QUARTZ (SiO₂), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

QUARTZ (SiO₂) (CAS 14808-60-7)

Listed: October 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

QUARTZ (SiO₂) (CAS 14808-60-7)

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 Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | Yes |
| 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 |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | 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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

| | |
|---------------------|---|
| Issue date | 12-September-2014 |
| Revision date | 26-September-2018 |
| Version # | 10 |
| Further information | This safety datasheet only contains information relating to safety and does not replace any product information or product specification. HMIS® is a registered trade and service mark of the NPCA. |
| HMIS® ratings | Health: 2* Flammability: 0 Physical hazard: 0 |
| NFPA ratings | Health: 1 Flammability: 0 Instability: 0 |

Disclaimer

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.