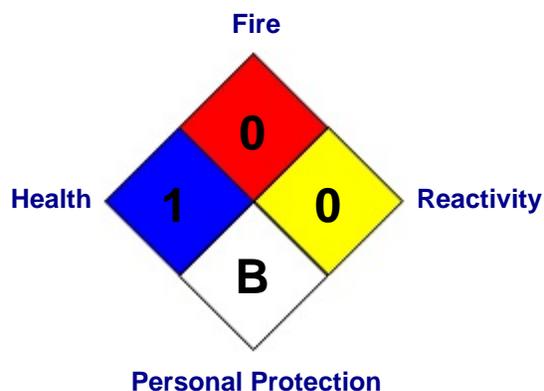




**HMS Hazard Rating:**

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal



***I. Chemical Product and Company Identification***

Product Name: CW-1 Silica Flour  
Identification #: 35-460-0001  
Product Use/Class: Fracturing Fluid Loss Additive  
Supplier: Superior Well Services  
Manufacturer: Weatherford Fracturing Technologies  
Emergency Contact: CHEMTREC 1 (800) 424-9300  
Prepared By: RAA  
Date Prepared: 04/08/2008

***II. Composition/Information on Ingredients***

Chemical Name: Quartz Silicdioxide  
CAS Number: 014808-60-7  
Percent by Mass Less Than: NI

**Exposure Limits**

Threshold Limit Value - Time Weighted Average: 15mg/m3  
Threshold Limit Value - Short Term Exposure Limit: NE  
Permissible Exposure Limit - Time Weighted Average: NE  
Permissible Exposure Limit - Ceiling: NE  
Company Threshold Limit - Time Weighted Average: NI  
Skin: NI

### III. Hazardous Identification

Emergency Overview:	Prolonged and/or massive inhalation of respirable crystalline silica may cause lung fibrosis, commonly referred to as silicosis.
Eye Contact:	May cause eye irritation, experienced as mild discomfort and slight redness.
Skin Contact:	Prolonged or repeated contact may cause irritation.
Inhalation:	Prolonged and/or massive inhalation of respirable crystalline silica may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Exposure to dust should be monitored and managed.
Ingestion:	Although this is an unlikely route of exposure, if more than several mouthfuls are swallowed, depression of the circulatory system, vomiting, and diarrhea may occur.
Chronic Harards:	IARC and the National Toxicology Program have determined that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite. Among individuals with silicosis, lung cancer occurs more frequently in those who smoke.

#### Effects of Overexposure

Primary Route(s) of Entry:	<input type="radio"/> Skin Contact	<input type="radio"/> Eye Contact	<input type="radio"/> Ingestion
	<input type="radio"/> Skin Absorbtion	<input type="radio"/> Inhalation	

### IV. First Aid Measures

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention if irritation persists.
Skin Contact:	Wash with soap and water. Get medical attention if irritation develops or persists.
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:	If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### V. Fire Fighting Measures

Flash Point:	Non-combustible
Auto Ignition Temperature:	Not Determined
Lower Explosive Temp.:	Not Determined
Upper Explosive Temp.:	Not Determined
Extinguishing Media:	Use media suitable for surrounding material.
Unusual Fire and Explosive Harards:	Finely divided dust suspensions may cause an explosion when given a source of ignition.
Special Fire Fighting Procedures:	As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Use water to keep containers cool.

### VI. Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled:	Sweep material into a pile and recover to a container. Avoid creating dust conditions. (See Exposure Controls/Personal Protection Section.)
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## VII. Handling and Storage

Handling:	Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Avoid breathing dust. In case of insufficient ventilation, wear suitable respiratory equipment.
Storage:	Keep container closed when not in use. Store in a cool, dry, well ventilated place away from incompatible materials.

## VIII. Exposure Controls/Personal Protection

Engineering Controls:	Local exhaust and ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.
Respiratory Protection:	Use NIOSH/MSHA approved respirators where dust may be generated.
Skin Protection:	Where contact is likely, wear chemical resistant gloves and rubber boots.
Eye Protection:	Wear safety glasses with side shields (or goggles).
Other Protective Equipment:	Emergency eyewash stations should be available in the work area.
Hygienic Practices:	Wash thoroughly after handling.

## IX. Physical and Chemical Properties

Boiling Point:	2230C	Vapor Density:	N/A
Odor:	None	Odor Threshold:	N/A
Appearance:	White, Grey, light brown fine grain	Evaporation Rate:	N/A
Solubility in H2O:	Insoluble	Specific Gravity:	2.65
Freeze Point:	N/A	pH at 50.0%:	7
Vapor Pressure:	N/A	Viscosity:	Not Determined
Physical State:	Powder		
Coefficient of Water Oil Distribution:	Not Determined		

## X. Stability and Reactivity

Conditions to Avoid:	None known.
Incompatibility:	None currently known.
Hazardous Decomposition Products:	Oxides of carbon.
Hazardous Polymization:	Will not occur.
Stability:	This product is stable under normal storage conditions.

## XI. Toxicological Properties

Toxicological Properties:	IARC and the National Toxicology Program have determined that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite. Among individuals with silicosis, lung cancer occurs more frequently in those who smoke.
Oral:	No product information is available.
Dermal:	No product information is available.
Inhalation:	No product information is available.

## ***XII. Ecological Information***

Ecological Properties: No product information is available.  
Ecotoxicity: No product information is available.  
Chemical Fate Information: No product information is available.

## ***XIII. Disposal Consideration***

Disposal Method: Material recovered should be contained in a closed container to avoid dust conditions. Consult local, state, and federal regulatory agencies for acceptable disposal procedures and disposal locations. Disposal in streams or sewers may be prohibited by federal, state, and local regulations.

RCRA Status: No product information is available.

## ***XIV. Transportation Information***

DOT Proper Shipping Name: Not DOT Regulated

DOT Technical Name:

DOT Hazard Class:

DOT Hazard Subclass:

DOT UN/NA Number:

Packing Group:

Resp. Guide Page:

## ***XV. Regulatory Information***

OSHA:	Non-hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)
TSCA Status:	All components of this product are listed on the Toxic Substance Control Act Inventory.
CERCLA SARA:	This product has been reviewed according to the EPA 'Hazard Categories' promulgated under the sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: Chronic Health Hazard
SARA Section 313 Required Reporting:	

## ***XVI. Other Information***

Other Information:	NA = Not applicable    ND = Not Determined    NI = No Information NE = Not Established
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This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, or when used in conjunction with other products, exposures must be evaluated by the user so that appropriate handling practices and training programs can be established to ensure safe workplace operations. This information is confidential to Superior Well Services, Ltd. (SWSI) and intended solely for the use of the individual or entity to whom they are directly distributed. Distribution or use beyond the individual or entity is strictly prohibited without the consent of SWSI.