1. Chemical product and company identification

Supplier: **Well Engineering & Technology Sdn Bhd (WellTech)** Unit 6.07, Level 6, Menara Hap Seng Jalan P. Ramlee, 50250 Kuala Lumpur.	**Trade Name:** **ULTRA SEAL® C**
Telephone Number: +603 2022 0803 Mobile Number: +6019 356 6035 Contact Person: Phil Navage	**Chemical / Technical Nature:** Chemical Family – Cellulose Product Use – Oil well drilling fluid additive, lost circulation material.

HMIS Rating

Health: 1 * **Flammability: 1** **Physical Hazard: 0** **PPE: E**

HMIS Key: 4=Severe, 3=Serious, 2=Moderate, 1=Slight, 0=Minimal Hazards.
*Chronic Effects – See Section 11. See Section 8 for Personal Protective Equipment recommendations.

2. Ingredients

No. Composition	CAS No.	Percent
Cellulose	9004-34-6	99-100
Silica, crystalline quartz	1408-60-7	0.1-1

Acute Toxicity Data

Ingredient	CAS No.	Acute Data
Cellulose	9004-34-6	Oral LD50: >5000 mg/kg (rat); Dermal LD50: >2000 LC50: >5800 m

Ingredient	Component Toxicological Summary
Silica, crystalline, quartz	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 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)

Product Toxicological Information:

Long term inhalation of particulate can cause irritation, inflammation and/or permanent injury to the lungs. Illnesses such as pneumoconiosis ("dusty lung"), pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma may develop.

3. Hazard Identification

Emergency Overview: Caution! May cause eye, skin, and respiratory tract irritation. Long-term inhalation of particulates may cause lung damage, cancer hazard. Contains crystalline silica, which may cause lung cancer.

WHMIS Class: D2A

Physical: Odor: Mild (Very Faint) Color: Tan State: Powder, dust

Potential Health Effects: Acute Effects

Eye Contact	May cause mechanical irritation
Skin Contact	May cause mechanical irritation. Long-term contact can cause skin dryness.
Inhalation	May cause mechanical irritation
Ingestion	May cause gastric distress, nausea and vomiting if ingested

Carcinogenicity & Chronic Effects: See Section 11 - Toxicological Information.

Routes of Exposure: Eyes. Dermal (skin) contact. Inhalation.

Target Organs: Eyes. Skin. Respiratory System.

4. Occupational Exposure Limits

Ingredient	CAS No	Wt. %	OSHA PEL TWA	AGGIH TLV/TWA	Other
Silica, crystalline, quartz	14808-60-7	0.1 – 1	see Table Z-3	0.05 mg/m3	3NIOSH: 0.05 (R) mg/m3 TW A 10H day/40H Wk)
Cellulose	9004-34-6	99 - 100	15 mg/m3 None (Total); 5 mg/m3 (Respirable)	10 mg/m3	N/A

Notes:
(R) Respirable fraction (ACGIH);

Table Z-3: PEL for Mineral Dusts containing crystalline silica are 10 mg/m3/ (%SiO2+2) for quartz and 1/2 the calculated quartz value for cristobalite and tridymite.

Engineering Controls: Use appropriate engineering controls such as, exhaust ventilation and process enclosure, to ensure air contamination and keep workers exposure below the applicable limits.

Personal Protection Equipment

Eye/Face Protection: Dust resistant safety goggles.

Skin Protection: Wear appropriate clothing to prevent repeated or prolonged skin contact. Chemical resistant gloves recommended for prolonged or repeated contact. Use protective gloves made have: Neoprene. Nitrile.

Respiratory Protection: Use at least a NIOSH-approved N95 half-mask disposable or reusable particulate respirator (dusk mask). In work environments containing oil mist/aerosol, use at least NIOSH-approved P95 half-mask disposable or reusable particulate respirator. For exposure exceeding 10 x PEL use a NIOSH-approved N100 Particulate Respirator.

General Hygiene Considerations: Work clothes should be washed separately at the end of each workday. Disposable clothing should be discarded, if contaminated with product.

5. Emergency and First Aid Procedures

Eye Contact	Promptly wash eyes with lots of water while lifting eyelids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
Skin Contact	Wash skin thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if any discomfort continues.
Inhalation	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Dilute with 2 - 3 glasses of water or milk, if conscious. Never give anything by mouth to an unconscious person. If signs of irritation or toxicity occur seek medical attention.

6. Physical and Chemical Properties

Colour	Tan
Odor	Mild (or faint) Physical State: Powder, dust.
pH	Not determined.
Vapor Pressure	Not applicable
Vapor Density (Air = 1)	Not applicable
Boiling Point	Not determined.
Melting/Freezing Point	Not determined.
Solubility (Water)	Insoluble
Specific Gravity (H20 = 1)	1.0 at 68˚F (20°C)
Evaporation Rate	Not applicable
Odor Threshold (s)	Not determined.

7. Fire Fighting Measures

Flammable Properties	Flash Point: F (C): Not applicable Flammable Limits in Air - Lower (%): Not applicable Flammable Limits in Air - Upper (%): Not applicable Auto-ignition Temperature: F(C) Not applicable Flammability Class: Not applicable Other Flammable Properties: Particulate may accumulate static electricity. Dusts at sufficient concentrations can form explosive mixtures with air. Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Protection Of Fire Fighters	Special Fire Fighting Procedures: Do not enter fire area without proper personal protective equipment; including NIOSH/MSHA approved self-contained breathing apparatus. Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Keep water run off out of sewers and waterways.

Hazardous Combustion Products: Not determined.

8. Accidental Release Measures

Personal Precautions	Use personal protective equipment identified in Section 4.
Spill Procedures	Evacuate surrounding area, if necessary. Wet product may create a slipping hazard. Contain spilled material. Avoid the generation of dust. Sweep, vacuum, or shovel and place into closable container for disposal.
Environmental Precautions	Do not allow entering sewer or surface and subsurface waters. Waste must be disposed of in accordance with federal, state and local laws.

9. Handling & Storage

Handling	Put on appropriate personal protective equipment. Avoid contact with skin and eyes. Avoid generating or breathing dust. Product is slippery if wet. Use only in a well-ventilated area. Wash contacted areas thoroughly after handling.
Storage	Store in dry, well-ventilated area. Keep container closed. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.

10. Ecological Information

Component Ecotoxicity Data: No data available.
Product Ecotoxicity Data: Contact Well Engineering & Technology Sdn. Bhd.
Biodegration: Not determined
Bioaccumulation: Not determined
Octanol/Water Partition: Not determined

11. Disposable Consideration

Waste Classification: Not determined.

Waste Management: Under U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user to determine at the time of disposal, whether the product meets RCRA criteria for the hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting materials hazardous. Empty containers retain residues. All labelled precautions must be observed.

Disposal Method: Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that the containers are empty by the RCRA criteria prior to disposal in a permitted industrial landfill.

12. Transportation Requirements

Shipping Description: Not regulated

TDG (Canada): Not Regulated

Shipping Description: Not regulated

Hazard Class: Not regulated.

Shipping Description: Not regulated

ICAO/IATA: Not regulated

13. Other Regulatory Controls

U.S. Federal and State Regulations

SARA 311/312:
SARA 311/312 Hazard Categories: Delayed (chronic) health hazard.

INGREDIENT	SARA 313	CERCLA RQ	SARA 302 /TPQs	CA 65 CANCER	CA 65 DEV. TOX.	CA 65 REPRO. F	CA 65 REPRO. M
Silica, crystalline, quartz	Not Listed	Not Listed	Not Listed	Carcinogen (airborne particles of respirable size); initial date 10/1/88	Not Listed	Not Listed	Not Listed

Cellulose	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

State Comments: Proposition 65: This product contains chemical(s) considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 to cause cancer and/or reproductive toxicity. See table under U.S. Federal and State Regulations for the specific chemicals.

International Inventories

Ingredient	CAS NO:	TSCA	DSL	NDSL	EINECS	AICS
Silica, crystalline, quartz	14808-60-7	Listed	Listed	Not Listed	Listed	Listed
Cellulose	9004-34-6	Listed	Listed	Not Listed	Listed	Listed

Inventory Comment: "Listed" indicates the component is listed or exempt from listing on the chemical inventory.

Canadian Regulations:

Controlled Products Regulations Statement: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Class: D2A