

Beyond
ENERGY SERVICES & TECHNOLOGY CORP.
SAFETY DATA SHEET

BEST FG+

Revised 10/2/2018

1. Identification

Material Name: BEST FG+
Product ID: Cellulosic fiber blend (Organic)
Product Use: Loss of circulation additive for drilling fluids
Supplier: Beyond Energy Services & Technology Corp.
Suite 2350, 444 5th Ave SW
Calgary, Alberta T2P 2T8
Emergency: Emergency Telephone No. (866) 648-9067 or (24-hr) (866) 648-9067

2. Hazard Identification

NFPA: Health: 1 Flammability: 1 Instability/Reactivity: 0

HMIS Classification:

Health	Environmental	Physical
1	1	None

GHS Classification:

Health Hazard: Carcinogenicity – Category 1A



Environmental Hazards: Not classified

Physical Hazards: Combustible Dust

Label Elements:



Signal Word: Danger

Hazard Statements:

H350 May cause cancer

H232 May form combustible dust concentrations in air



SAFETY DATA SHEET

BEST FG+

Revised 10/2/2018

Precautionary Statements:

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use
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
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/clothing/eye and face protection
P281 Use personal protection equipment as required
P308+313 If exposed or concern: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition / Information on Ingredients

Substance	CAS #	Wt.%
Cellulose	9004-34-6	0-96
Carboxymethylcellulose	9004-32-4	.5-2.5
styrene-divinylbenzene-copolymer with trialkyl ammonium groups in OH- form	69011-18-3	.5-1.5
styrene-divinylbenzene-copolymer with sulfonated groups in H-form	69011-20-7	0.5 – 1.5
Crystalline Silica, Quartz	14808-60-7	0.1-1

4. First Aid Measures

Inhalation: IF INHALED: Remove person to fresh air and ensure comfortable breathing. Get medical attention if irritation persists.

Skin Contact: IF ON SKIN: Wash with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

Eye Contact: IF IN EYES: Rinse cautiously with water. Remove contact lenses, if present and easy to do so. Continue rinsing. Get medical attention if irritation persists.

Ingestion: IF SWALLOWED: drink plenty of water or milk. Never give anything by mouth to an unconscious or convulsing victim. Get medical attention if you feel unwell.

Note to physician: Treat symptomatically.

5. Fire Fighting Measures

Flash Point Not determined

Suitable Extinguishing media: Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing media: None Known



ENERGY SERVICES & TECHNOLOGY CORP.

SAFETY DATA SHEET

BEST FG+

Revised 10/2/2018

Special exposure hazards: Particulate may accumulate static electricity. Dusts at sufficient concentrations can form explosive mixtures with air.

Combustion products: None known.

Protection of firefighters: Fire fighters should wear full firefighting turn-out gear (full bunker gear) and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Hazard Classification: Health: Flammability: 1 Instability: 0 Special: None known

6. Accidental Release Measures

Determine whether to evacuate or isolate the area according to your local emergency plan.

Personal precautions: Use suitable protective equipment (see section 8) to prevent contamination of skin, eyes and personal clothing. Provide sufficient ventilation. No special technical protective measures are required.

Methods for cleanup: Use appropriate safety equipment and PPE. Evacuate surrounding area, if necessary. Dispose in accordance with applicable regulations and product characteristics at time of disposal (see also Section 13). Clean area as appropriate since spilled materials, even in small quantities, can present a slip hazard.

7. Handling and Storage

Handling: Use proper PPE. Prevent spills and leakage. No special technical protective equipment measures are required. Handle in accordance with good industrial hygiene and safety practices. Use where there is adequate ventilation. Use proper bonding and/or grounding procedures.

Storage: Store in a cool, dry well-ventilated place in the original container. Keep away from incompatible materials. Follow safe warehouses practices regarding palletizing, shrink-wrapping and stacking.

8. Exposure Controls / Personal Protection

Exposure guideline

Cellulose

Comments:

ACGIH®=American Conference of Governmental Industrial Hygienists. TLV®=Threshold Limit Value

TWA= Time-weighted Average. 10 mg/m³

OSHA=US Occupational Safety and Health Administration. TWA = Time-Weighted Average.

PEL=Permissible Exposure Limits. 15 mg/m³ (total dust); 5 mg/m³ (respirable) (crystalline silica, quartz)

ACGIH®=American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value.

TWA = Time-weighted Average. 0.25 mg/m³ (respirable)

OSHA = US Occupational Safety and Health Administration. TWA Time Weighted Average. The PEL for Mineral dusts containing crystalline silica are 10 mg/m³ divided by the value of (%SiO₂+2) for quartz; ½ the calculated quartz value for crystobalite and tridymite.

NIOSH. TWA= Time-Weighted Average. 0.05 mg/m³ (respirable), based on 10-hr day, 40-hr week.

Engineering controls: Local exhaust ventilation is recommended during all processing operations.

Personal protection: General: General hygiene considerations are appropriate when used as recommended. The following precautions are recognized as common good industrial hygiene practice.

Emergency conditions may require additional precautions. Follow precautions listed and recommendations for personal protective equipment.

Eye: Wear eye and face protection. Have eye-wash stations available where eye contact can occur.

SAFETY DATA SHEET

BEST FG+

Revised 10/2/2018

Skin: Avoid skin contact. Wear gloves impervious to conditions of use. Additional protection may be necessary to prevent skin contact including use of apron, face shield, boots or full body protection. Wash hands thoroughly after handling. A safety shower should be located in the work area.

Respiratory: NIOSH approved respiratory protection should be worn if exposure limits are exceeded. A NIOSH approved respirator is generally acceptable for concentrations up to 10 times the PEL. Use a NIOSH approved air-supplied respirator for higher concentrations, unknown concentrations and for oxygen deficient atmospheres. Use only outdoors or in a well-ventilated area. Engineering controls are the preferred means for controlling chemical exposures. In case of inadequate ventilation wear respiratory protection. Respiratory protection may be needed for non-routine or emergency situations.

9. Physical and Chemical Properties

Appearance:	Tan Granules
Odor:	Slight, Mild
Odor threshold:	Not available
pH:	6-8
Melting/ Freezing point/ range:	Not available
Boiling point	Not available
Flash Point:	Not available
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Upper/ lower flammability or explosive limits:	Not available
Vapor pressure: @25°C	Not available
Vapor density:	Not available
Relative density: (water=1)	1.40-1.65 at 68°F
Solubility in water:	Insoluble
Solubility in fats/ oils:	Not available
Partition Coefficient (n-octanol-water):	Not available
Autoignition temperature:	Not available
Decomposition temperature:	Not available

10. Stability and Reactivity

Chemical Stability:	Product is stable at ambient temperature and pressure.
Hazardous Reactions:	Hazardous polymerization will not occur.
Conditions to Avoid:	None identified
Incompatible Materials:	Oxidizing material can cause a reaction.
Hazardous Decomposition Products	None determined

11. Toxicological Information

LD50 Oral Rat:	>5,000 mg/kg
LD50 Dermal Rat:	>2,000 mg/kg
Skin Irritation:	May cause mechanical irritation
Eye Irritation:	May cause mechanical irritation



SAFETY DATA SHEET

BEST FG+

Revised 10/2/2018

Effects of Short Term

(Acute) Exposure:

Inhalation:

Inhalation vapors in high concentrations may cause irritation of respiratory system. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Ingestion:

May cause gastric distress, nausea and vomiting if ingested.

Effects of Long Term

(Chronic) exposure:

Product contains small amounts of crystalline silica. Long term Inhalation of the particles 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. Long term contact can cause Skin dryness.

Carcinogenicity

IARC: Group 1

NTP:

ACGIH®: A2

Carcinogenic to humans

Reasonably anticipated human carcinogen.

Suspected human carcinogen.

No information located:

Respiratory and/or Skin Sensitization, Teratogenicity/ Embryotoxicity, Reproductive Toxicity, Toxicologically Synergistic Materials.

12. Ecological Information

Environmental Fate

And distribution:

Not available

Environmental effects

Complete information is not available yet

Toxicity:

Persistence and

Not available

Degradation:

Bioaccumulative potential:

Not available

Mobility in soil:

Not available

Effects in waste plants

Not available

13. Disposal Considerations

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.

14. Transport Information

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.

Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Material Name: BEST FG+

Page 5 of 7

SDS-US



ENERGY SERVICES & TECHNOLOGY CORP.

SAFETY DATA SHEET

BEST FG+

Revised 10/2/2018

Not subject to IATA regulations.

15. Regulatory Information

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200 USA

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA inventory of Chemical Substances

Section 311/312 Hazard Class (40CFR 370) - Delayed (chronic) health hazard

Supplemental State Compliance Information

“California”

Warning: This product contains the following known substances known to the State of California to cause cancer and/or reproductive harm: crystalline silica

CAS Number	Wt%	Component Name	
14808-60-7	0.1-1	Crystalline silica (quartz)	Carcinogen

“New Jersey”

CAS Number	Wt%	Component Name
9004-34-6	0-96	Cellulose
9004-32-4	.5-2.5	Carboxymethylcellulose
14808-60-7	.1-1	Crystalline silica (quartz)
69011-18-3	.5-1.5	Benzene, diethenyl-, polymer with ethenylbenzene and ethenylethylbenzene, chloromethylated, trimethylaminequaternized, hydroxide
69011-20-7	.5-1.5	Diethenyl-benzene polymer with ethenylbenzene and ethenylethylbenzene, sulfonated

“Pennsylvania”

CAS Number	Wt%	Component Name
9004-34-6	0-96	Cellulose
9004-32-4	.5-2.5	Carboxymethylcellulose
14808-60-7	.1-1	Crystalline silica (quartz)
69011-18-3	.5-1.5	Benzene, diethenyl-, polymer with ethenylbenzene and ethenylethylbenzene, chloromethylated, trimethylaminequaternized, hydroxide
69011-20-7	.5-1.5	Diethenyl-benzene polymer with ethenylbenzene and ethenylethylbenzene, sulfonated



SAFETY DATA SHEET

BEST FG+

Revised 10/2/2018

16. Other Information

Disclaimer:

ALL THE RECOMMENDATIONS AND SUGGESTIONS HEREIN CONCERNING OUR PRODUCT ARE BASED UPON TESTS AND DATA BELIEVED TO BE RELIABLE, HOWEVER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY, AND SUITABILITY FOR HIS OWN USE OF THE PRODUCT DESCRIBED HEREIN. SINCE THE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, NO GUARANTEE, EXPRESSED OR IMPLIED, IS MADE BY BEYOND ENERGY SERVICES & TECHNOLOGY CORP AS TO THE EFFECTS OF SUCH USE, THE RESULTS TO BE OBTAINED, OR THE SAFETY AND TOXICITY OF THE PRODUCT NOR DOES BEYOND ENERGY SERVICES & TECHNOLOGY CORP. ASSUME ANY LIABILITY ARISING OUT OF USE BY OTHERS. NOR IS THE INFORMATION HEREIN TO BE CONSIDERED AS ABSOLUTELY COMPLETE SINCE ADDITIONAL INFORMATION MAY BE NECESSARY OR DESIRABLE WHEN PARTICULAR OR EXCEPTIONAL CONDITIONS OR CIRCUMSTANCES EXIST OR BECAUSE OF APPLICABLE LAWS OR GOVERNMENT REGULATIONS.

Date Prepared: 2 October 2018

Supersedes: Initial Issue

MSDS ID: BEST FG+