SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER: Pre-co-Floc® PB40, PB40M, PB33, PB33C, PB100M, PB200M, PB300M, PB20, PB20M, PB900, NB10

CHEMICAL NAME: Powdered Cellulose

CHEMICAL FAMILY: Cellulose

MATERIAL USE: Filter Aid

RESTRICTION ON USE: None Known

MANUFACTURER: EP Minerals, LLC., 9785 Gateway Dr., Reno, NV 89521

TELEPHONE NO.: (775) 824 7600 (Monday – Friday 8:00 am PST – 5:00 pm PST)

EMERGENCY TELEPHONE NO.: (775) 824 7600 (Monday – Friday 8:00 am PST – 5:00 pm PST)

SDS DATE OF PREPARATION: May 21, 2018

SECTION 2: HAZARDS IDENTIFICATION

OSHA GHS HAZARD CLASSIFICATION: Combustible Dust

HAZARDS NOT OTHERWISE CLASSIFIED: None

LABEL ELEMENTS: WARNING May cause combustible dust concentrations in the air. Keep away from all ignition sources including heat sparks and flame. Prevent dust accumulations to minimize explosion hazards.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT IDENTIFICATION</th>
<th>APPROXIMATE CONCENTRATION (%)</th>
<th>C.A.S. NUMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulose</td>
<td>100%</td>
<td>9004-34-6</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

EYE: Flush eyes with generous quantities of water or eye rinse solution. Consult physician if irritation persists.

SKIN: Use moisture renewing lotions if dryness occurs.

INGESTION: Drink generous amounts of water to reduce bulk and drying effects.

INHALATION: Remove to fresh air. Blow nose to evacuate dust.

Most important symptoms/effects, acute and delayed: Dust may cause abrasive irritation to eyes. Prolonged skin contact may cause dryness. Dust may cause nose, throat and upper respiratory tract irritation. Prolonged inhalation of high concentration of dust may cause lung effects.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is not normally required. If dust irritates the eyes, seek medical attention.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water is most effective for ordinary combustibles such as cellulose.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Cellulose is combustible and will burn under fire conditions. Dust generated in handling this material may present a potential fire and explosion hazard if suspended in air at high concentrations. Settled dust presents a fire hazard. Resuspension of the dust into the air by vibration, traffic, material handling, etc. in high concentrations in the presence of an ignition source could result in a dust explosion. Minimize the generation and accumulation of dust.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: No special procedures are required.
SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
If dust is present, use respirator fitted with particulate filter as specified in Section 8. Protect eyes with goggles.

ENVIRONMENTAL PRECAUTIONS
This material is not a significant environmental concern.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP
Scoop or shovel up using methods that minimize the generation of airborne dust. Nonsparking tools should be used. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentrations. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING
Avoid contact with eyes. Avoid breathing dust. Repair or dispose of broken bags. Observe all label precautions and warnings. Keep product away from open flames and hot surfaces. Possible combustible dust hazard. Minimize the generation and accumulation of dust. Keep dust away from open flames, hot surfaces and sources of ignition. Follow good housekeeping practices to keep surfaces, including areas overhead such as piping, drop ceilings, ductwork, etc. free from settled dust. Dry powders can build static electricity charges when subjected to friction of transfer and in mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

CONDITIONS FOR SAFE STORAGE
Store in a dry place to maintain packaging integrity and product quality.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>MSHA PEL</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulose, wood fiber</td>
<td>5 mg/m³ respirable dust</td>
<td>10 mg/m³</td>
<td>5 mg/m³ respirable dust</td>
<td>5 mg/m³ respirable dust</td>
</tr>
<tr>
<td></td>
<td>15 mg/m³ total dust</td>
<td></td>
<td>15 mg/m³ total dust</td>
<td>10 mg/m³ total dust</td>
</tr>
</tbody>
</table>

ENGINEERING CONTROLS
Use general or local exhaust ventilation to control dust within recommended exposure limits. Refer to ACGIH publication “Industrial Ventilation” or similar publications for design of ventilation systems. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e. there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

PERSONAL PROTECTIVE EQUIPMENT:

EYE / FACE PROTECTION
Goggles to protect from dust

SKIN PROTECTION
No special equipment is needed.

RESPIRATORY PROTECTION
Respirators fitted with filters certified to standard 42CFR84 under series N95 should be worn when dust is present. If the dust concentration is less than ten (10) times the Permissible Exposure Limit (PEL) use a quarter or half-mask respirator with a N95 dust filter or a single use dust mask rated N95. If dust concentration is greater than ten (10) times and less than fifty (50) times the PEL, a full-face piece respirator fitted with replaceable N95 filters is recommended. If dust concentration is greater than fifty (50) and less than two hundred (200) times the PEL use a power air-purifying (positive pressure) respirator with a replaceable N95 filter. If dust concentration is greater than two hundred (200) times the PEL use a type C, supplied air respirator (continuous flow, positive pressure), with full face piece, hood or helmet.

GENERAL HYGIENE
Avoid breathing dust. Avoid contact with eyes. Wash hands after handling and before eating or drinking.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>APPEARANCE, COLOR</th>
<th>White powder</th>
<th>ODOR</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL STATE</td>
<td>Solid</td>
<td>ODOR THRESHOLD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>Not applicable</td>
<td>VAPOR DENSITY</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOILING POINT</td>
<td>Not applicable</td>
<td>MELTING POINT</td>
<td>Not applicable</td>
</tr>
<tr>
<td>FLASH POINT</td>
<td>Not applicable</td>
<td>pH (10% SUSPENSION)</td>
<td>5.0 – 7.5 typical</td>
</tr>
<tr>
<td>FLAMMABILITY LIMITS</td>
<td>Not applicable</td>
<td>EVAPORATION RATE</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
## MATERIAL NAME
Pre-co-Floc® PB40, PB40M, PB33, PB33C, PB100M, PB200M, PB300M, PB20, PB20M, PB900, NB 10

<table>
<thead>
<tr>
<th>DECOMPOSITION TEMPERATURE</th>
<th>SPEC. GRAVITY / RELATIVE DENSITY</th>
<th>AUTOIGNITION TEMPERATURE</th>
<th>PARTITION COEFFICIENT – n-OCTANOL/WATER</th>
<th>FLAMMABILITY (solid/gas)</th>
<th>SOLUBILITY – WATER</th>
<th>VISCOSITY</th>
<th>HAZARDOUS DECOMPOSITION PRODUCTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>200° C</td>
<td>Variable- dependent on species and moisture 0.10 – 0.25 typical</td>
<td>500° C</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Insoluble</td>
<td>Not applicable</td>
<td>Oxides of carbon</td>
</tr>
</tbody>
</table>

## SECTION 10: STABILITY AND REACTIVITY

**REACTIVITY**
Material is not reactive.

**CHEMICAL STABILITY**
Material is stable.

**POSSIBILITY OF HAZARDOUS REACTIONS**
Material is not reactive.

**CONDITIONS TO AVOID**
Extreme heat / open flame

**INCOMPATIBLE MATERIALS**
None

**HAZARDOUS DECOMPOSITION PRODUCTS**
Oxides of carbon

## SECTION 11: TOXICOLOGICAL INFORMATION

**POTENTIAL HEALTH EFFECTS**
See below and Section 11 for additional information

**Likely Routes of Exposure**
See below

**EYE**
May cause irritation (tear formation and redness) if dust gets in eyes.

**SKIN**
Not absorbed by the skin, but may cause dryness if prolonged exposure.

**INGESTION**
Ingestion of small to moderate quantities is not considered harmful, but may cause irritation of the mouth, throat and stomach.

**INHALATION**
Acute inhalation can cause dryness of the nasal passage and lung congestion, coughing and general throat irritation. Chronic inhalation of dust should be avoided.

**CHRONIC EFFECTS**
Chronic exposure may lead to dermatitis or respiratory sensitization.

**CARCINOGENICITY**
Not listed as a carcinogen.

**NTP**
Cellulose is not classified as a carcinogen.

**IARC**
Cellulose is not classified as a carcinogen.

**NUMERICAL MEASURES OF TOXICITY**
No data available

**CORROSIVENESS, SENSITIZATION, IRRITANCY**
Not applicable

**REPRODUCTIVE TOXICITY**
Not available

**TERATOGENICITY, MUTAGENICITY**
Not available

## SECTION 12: ECOLOGICAL INFORMATION

**ECOTOXICITY:**
These products have no demonstrated toxicity in regards to aquatic or terrestrial life.

**PERSISTENCE AND DEGRADABILITY**
Biodegradable but not readily biodegradable.

**BIOACCUMULATIVE POTENTIAL**
Little potential for bioaccumulation

**MOBILITY IN SOIL**
No mobility

**OTHER ADVERSE EFFECTS**
None known
MATERIAL NAME
Pre-co-Floc® PB40, PB40M, PB33, PB33C, PB100M, PB200M, PB300M, PB20, PB20M, PB900, NB 10

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL
If this material as supplied becomes a waste, use solid waste disposal common to landfill type operations or in slurry to sumps. Not considered a hazardous waste under RCRA (40CFR Part 261).

PACKAGING DISPOSAL
Dispose of in accordance with applicable laws and regulations, typically solid waste disposal common to landfill type operations.

SECTION 14: TRANSPORT INFORMATION

BASIC SHIPPING INFORMATION
No restrictions.

ADDITIONAL INFORMATION
No special requirements or placarding necessary.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL:

TSCA
Cellulose appears on the EPA TSCA inventory list.

CERCLA
Cellulose is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR 302.

SARA TITLE III
Not listed.

SECTION 16: OTHER INFORMATION

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and handling of Combustible Particulate Solids, for safe handling.

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