

**I. PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME** FLC2000®

**Product Use:** Drilling Fluid Additive

**CAS No.** Blend

**Supplier** Impact Fluid Solutions, LLC      Impact Fluid Solutions (UK)  
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**II. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW** May cause irritation to skin, eyes and respiratory system. High concentrations of dust, may constitute an explosion hazard.

**POTENTIAL HEALTH EFFECTS**

**Eye Contact** May cause eye irritation.

**Skin Contact** May cause irritation.

**Ingestion** Oral exposure is not expected to occur.

**Inhalation** Avoid inhalation of dusts. May cause irritation to the respiratory system.

**Long Term Exposure** No known long term hazards are associated with the use of this material.

**III. COMPOSITION/INFORMATION ON INGREDIENTS**

A proprietary blend of polymers, organic natural products and metal oxides.

| CHEMICALS   | CAS No.   | %W/W |
|-------------|-----------|------|
| Iron Oxides | 1371-61-9 | 3-19 |

Occupational Exposure Limits - See Section: VIII (8)

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**IV. FIRST AID MEASURES**

**Inhalation** Move person to fresh air. If symptoms develop, obtain medical attention.

**Skin Contact** Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water. If symptoms persist, obtain medical attention.

**Eye Contact** If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.

**Ingestion** Rinse mouth. If symptoms develop, obtain medical attention.

**V. FIRE-FIGHTING MEASURES**

**Flammable./Explosive Properties** High concentrations of dust, may constitute an explosion hazard. Dust clouds are sensitive to ignition by electrostatic discharge. Dampening with water can reduce dust.

**Extinguishing media** Water spray, foam, dry powder or CO2.

**Unsuitable Extinguishing Media** None known.

**Fire Fighting Protective Equipment** Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

**VI. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions** Wear suitable protective clothing. See Section:VIII

**Environmental Precautions** Avoid run off to waterways and sewers.

**Methods for Cleaning up** Sweep up spilled substance but avoid breathing dust. Transfer to a container for disposal or recovery.

**Other** Ensure adequate ventilation. Caution - spillages may be slippery. Disposal should be in accordance with local, state or national legislation.

**VII. HANDLING AND STORAGE**

**Handling** Avoid generation of dust. Use only with adequate ventilation to keep exposures (airborne levels of dust, fume, vapour etc) below recommended exposure limits.

**Storage** Avoid build up of dust. Keep containers in a clean, cool and dry area away from heat sources.

**Storage Temperature:** Ambient temperatures.

**VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**OCCUPATIONAL EXPOSURE LIMITS**

| HAZARDOUS INGREDIENT(S) | CAS No.   | LTEL (8 hr TWA ppm) | LTEL (8 hr TWA mg/m³) | STEL (ppm) | OSHA PEL 10 mg/m3 |
|-------------------------|-----------|---------------------|-----------------------|------------|-------------------|
| Iron Oxides             | 1371-61-9 | -                   | 5 mg/m³               | -          | 5 mg/m3           |

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**PRODUCT INFORMATION**

|                             |  |
|-----------------------------|--|
| <b>Engineering Controls</b> | Provide adequate ventilation.  |
| <b>Eye Protection</b>       | Wear protective eyewear (goggles, face shield, or safety glasses).           |
| <b>Gloves</b>               | Protective gloves.   |
| <b>Respirators</b>          | An approved dust mask should be worn if dust is generated during handling.   |
| <b>Other</b>                | Wear protective equipment to comply with good occupational hygiene practice. |

**IX. PHYSICAL AND CHEMICAL PROPERTIES**

|  |                         |
|--|-------------------------|
| <b>Form</b>                                      | Powder.                 |
| <b>Color</b>                                     | Brown.                  |
| <b>Odor</b>                                      | Slight.                 |
| <b>pH (Value)</b>                                | 7 (3% aqueous solution) |
| <b>Flash Point (°C) [Open cup]/ [Closed cup]</b> | Not applicable.         |
| <b>Specific Gravity</b>                          | <1                      |
| <b>Bulk Density (g/ml)</b>                       | 30 – 40 lb/cu ft        |
| <b>Solubility (Water)</b>                        | Partially soluble.      |

**X. STABILITY AND REACTIVITY**

|   |  |
|---|--|
| <b>Chemical Stability</b>                 | Stable under normal conditions.  |
| <b>Hazardous Reactions</b>                | None   |
| <b>Incompatible materials:</b>            | Keep away from heat and sources of ignition Oxidizing agents.                |
| <b>Hazardous Decomposition Product(s)</b> | Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide |

**XI. TOXICOLOGICAL INFORMATION**

|                           |  |
|---------------------------|--|
| <b>Inhalation</b>         | Avoid inhalation of high concentrations of dusts.                        |
| <b>Skin Contact</b>       | May cause irritation   |
| <b>Eye Contact</b>        | Dust may have irritant effect on eyes.                                   |
| <b>Ingestion</b>          | Ingestion may cause irritation of the gastrointestinal tract.            |
| <b>Long Term Exposure</b> | No known long term hazards are associated with the use of this material. |

**XII. ECOLOGICAL INFORMATION**

|  |   |
|--|---|
| <b>Environmental Fate and Distribution</b> | Avoid release to the environment.   |
| <b>Persistence and Degradation</b>         | Not determined  |
| <b>Toxicity</b>                            | This product has been evaluated by CEFAS (The Center for Environment, Fisheries & Aquaculture Science) and has been accepted onto the list of Approved Products suitable for use by the North Sea Oil and Gas Industry.<br>LC50 ((Rainbow trout): 490 mg/l – 96 hr.<br>LC50 (Daphnia magna): 980 mg/l – 48 hr.<br>BOD: 200 mg O <sub>2</sub> /gram<br>COD: 1600 mg O <sub>2</sub> /gram |

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**XIII. DISPOSAL CONSIDERATIONS**

**Regulatory information** The waste is considered to be non hazardous.  
**Recommended:** Disposal should be in accordance with local, state or national legislation.

**XIV. TRANSPORT INFORMATION**

**Harmonized Tariff Number** 3824.90.92.90

**US FEDERAL TRANSPORT REGULATIONS**

**D.O.T. Classification** Not classified as dangerous for transport.  
**Proper Shipping Name** Not classified as dangerous for transport.

**TGD - CANADIAN TRANSPORT REGULATIONS**

**Proper Shipping Name** Not classified as dangerous for transport

**INTERNATIONAL TRANSPORT REGULATIONS**

**Proper Shipping Name** Not classified as dangerous for transport.

**SEA**

**IMDG Class** Not classified as dangerous for transport.

**AIR**

Not classified as dangerous for transport.

**XV. REGULATORY INFORMATION**

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**US Federal Regulations**

SARA 302 - Extremely Hazardous Substances None  
 SARA 311/312 - Hazard Categories Acute – Yes, Chronic – No, Flammability – No, Reactivity - No  
 SARA 313 - Toxic Chemicals None

**US State Regulations**

Proposition 65 (California) None

**Canada – WHMIS Classification** D2B

TSCA (Toxic Substance Control Act) Listed

**XVI. OTHER INFORMATION**

| NFPA        | NFPA Rating | HMIS (Hazardous Material Information System) |   |
|-------------|-------------|--|---|
| Health      | 1           | Health                                       | 1 |
| Fire        | 1           | Flammability                                 | 1 |
| Instability | 0           | Reactivity                                   | 0 |
|             |             | Personal Protection                          | E |

**Packaging:** 25 pound (11.34 kg) sacks, 48 sacks per pallet, 1200 lbs. (544.32 kg),. Pallet and shrink-wrap weight approximately 50 lbs (22.7 kg). Full, shrink-wrapped pallets are 44 square by 40 high, weighing approximately 1250 (568.2 kg).

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**GLOSSARY**

|        |   |
|--------|---|
| CERCLA | Comprehensive Environmental Response Compensation and Liability Act |
| COD    | Chemical Oxygen Demand (COD)  |
| LC50   | Lethal Concentration  |
| NFPA   | National Fire Protection Association                                |
| OSHA   | Occupational Safety and Health Administration                       |
| R      | Respirable Dust   |
| SARA   | Superfund Amendments and Reauthorization Act                        |
| TLV    | Threshold Limit Value (ACGIH)                                       |
| TWA    | Time Weighted Average   |

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