

# MATERIAL SAFETY DATA SHEET

Dynamic Drilling Fluids  
216 16<sup>th</sup> St Denver, CO 80202  
TEL (303) 573-6827  
FAX: (303)573-5110

Page 1 of 4

## 1 PRODUCT IDENTIFICATION

### PRODUCT NAME:

**DDF PAC (Polyanionic Cellulose)**

**PAC** is the same matter as sodium carboxymethyl cellulose(CMC) with high uniformity ,high degree of substitution and high quality.

CHEMICAL DESCRIPTION Sodium Carboxymethyl Cellulose

CAS NUMBER 9004-32-4

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

This product is considered hazardous according to the OSHA Hazard Communication Standard 29CFR1910.1200 due to flammable dust potential.

If this product is used in a manner that could generate particulates (dust), refer to MSDS Section 7, Handling and Storage, and Section 8, Recommended Exposure Limits and Personal Protective Equipment.

## 3 HAZARDS IDENTIFICATION

Caution	Wet floors on which this powder is split may become very slippery. This powder when dispersed in air represents an explosion hazard.
Short Term Exposure	No permanent effects on humans known from discontinuous short-term exposure when used as directed.
Long Term Exposure	No permanent effects on humans known from discontinuous long-term exposure when used as directed.
Ecology	No long-term ecological effects.

## 4 FIRST AID MEASURES

Skin	Wash off immediately with plenty of soap and water.
Eyes	Irrigate with water.
Oral	Drink large quantities of water. Rinse out mouth with water.
Inhalation	Remove to fresh. Treat any irritation symptomatically. If necessary consult doctor.

# MATERIAL SAFETY DATA SHEET

Dynamic Drilling Fluids

216 16<sup>th</sup> St Denver, CO 80202

TEL (303) 573-6827

FAX: (303)573-5110

Page 2 of 4

---

## 5 FIRE FIGHTING MEASURES

Conditions to Avoid	Keep away from heat, sparks and flames. Avoid excess dust in the atmosphere since this is an explosion hazard in the presence of electrical sparks and static.
Fire Fighting Measures	Fight the fire using water spray, sand, dry power, carbon dioxide or foam.
Protective Equipment	Impervious gloves. Use goggles. Use a dust mask.
Combustion Products	Carbon monoxide, carbon dioxide, steam and smoke.

## 6 ACCIDENTAL RELEASE MEASURES

Caution	Wet floors on which this power is spilt may become very slippery. This power when dispersed in air represents an explosion hazard.
Spillage	Sweep up this product for use or place in a container for disposal.

## 7 HANDLING & STORAGE

Handling	Handle in a well ventilated area. The fine particles and powder should be regarded as an inert, nuisance dust with a threshold limit value of 10mg/m <sup>3</sup> for total dust and of 3mg/m <sup>3</sup> for the respirable portion. Avoid static build-up when emptying big bags. Earth all equipment and attach a grounding cable to the bag grounding connection.
Storage	Product should be stored, under cover, in a clean wet ventilated area. Maintain a clean area by removing dust. Keep away from heat, sparks and other sources of ignition. Store in a dry area.
Packaging Material to Avoid	None. The packaging material should have reasonable moistures and air barrier properties.

# MATERIAL SAFETY DATA SHEET

Dynamic Drilling Fluids  
216 16<sup>th</sup> St Denver, CO 80202  
TEL (303) 573-6827  
FAX: (303)573-5110

Page 3 of 4

---

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls	Handle in a well-ventilated area. Normal industrial hygiene measures should be sufficient.
Protective Equipment	Impervious gloves. Use goggles. Use a dust mask.

## 9 PHYSICAL & CHEMICAL PROPERTIES

Typical data are:

Form	Free flowing powder or granulate
Color	Light cream to white
Odor	Odorless
Solubility	Complete in water
pH value (25°C)	6-8 (2% solution)
Dust explosion data:	
Auto-flammability (°C)	~370 (dust)
Explosion Limit-lower (g/m <sup>3</sup> )	165 (dust)

## 10 STABILITY & REACTIVITY

Stability	This product is chemically stable.
Reactivity	No additional hazardous chemicals are known to be formed when used as directed in this application.

## 11 TOXICOLOGICAL INFORMATION

Dermal	This product is not absorbed percutaneously in rats, rabbits or humans. This product is believed not to cause skin irritation or sensitization.
Eyes	This product should not be regarded as an eye irritant.
Oral	This product is not metabolized in the body. No adverse effects known as a result of ingestion. LD50>2000mg/kg.
Inhalation	No effects known.
Additional Information	Hercules has not determined the safety of this product for parenteral or medical implant uses.

## 12 ECOLOGICAL INFORMATION

Acute Fish Toxicity	The four days median tolerance limit (TL50) of rainbow trout and bluegills under static conditions is greater
---------------------	---

# MATERIAL SAFETY DATA SHEET

Dynamic Drilling Fluids

216 16<sup>th</sup> St Denver, CO 80202

TEL (303) 573-6827

FAX: (303)573-5110

Page 4 of 4

---

Biodegradability      than 100 parts product per million parts of water. In addition no adverse reactions were noted in the fish exposed to this product. These results demonstrate that sodium CMC has a low order of toxicity in fish.

WGK Classification      1

This product does not represent a long term ecological problem. It is slowly biodegradable.

## 13 DISPOSAL CONSIDERATIONS

Disposal      Waste incineration or special disposal with the approval of the responsible local authority.

EWC Classification      07 07 99

## 14 TRANSPORT INFORMATION

UN Number      None

IMO Classification      None

ADR Classification      None

IATA Classification      None

## 15 REGULATORY INFORMATION

PAC Labelling

Danger symbols      None

Risk Phrases      None

Safety Phrases      None

40CFR261, Subpart C.

## 16 OTHER INFORMATION

Update information status      Upgraded MSDS to EC

Additional Information      Further information and reference on the safety aspects of the product may be obtained from:  
Luzhou North Chemical Industries Co.,Ltd.