

Date prepared: 2-28-13  
Revision date: 2-28-13  
Part number: P-208.01  
Emergency number: 800-424-9300

# CFR201

## Material safety data sheet

### 1. Chemical product & Company information

Archer Pressure Pumping, LLC  
10613 W. Sam Houston Pkwy N.  
Houston, Texas 77079

Tel: 580 670 4036  
Fax: 405 285 6165

**Product name:** CFR201  
**Product Application:** Flocculant, Viscosifier

NFPA 704M/HMIS rating

Health 0/1  
Flammability 1/1  
Instability 0/0  
Other

0 = Insignificant  
1 = slight  
2 = moderate  
3 = high  
4 = extreme  
\* = chronic health hazard

### 2. Composition/information on ingredients

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Hazardous substances	CAS #	% W/W
The substances in this product are not classified as hazardous or are present below hazard cut-off limits	-	100.0

### 3. Hazards identification

#### EMERGENCY OVERVIEW

##### CAUTION

May cause irritation with prolonged contact. Toxic to aquatic organisms.

Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. After contact with skin, wash immediately with plenty of soap and water. Protect product from freezing. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

**Primary routes of exposure:** Eye, skin  
**Human health hazards - acute:** N/A  
**Eye contact:** May cause irritation with prolonged contact.  
**Skin contact:** Frequent or prolonged contact with product may defat and dry the skin, leading to discomfort and dermatitis.

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**Ingestion:** Not a likely route of exposure. If swallowed a jelly mass may form which in digestion may cause blockage.

**Inhalation:** Not a likely route of exposure. Repeated or prolonged exposure may irritate the respiratory tract.

**Aggravation of existing conditions:** Skin contact may aggravate an existing dermatitis condition.

**Human health hazards - Chronic:** No adverse effects expected other than those mentioned above.

#### 4. First aid measures

**Eye contact:** Wipe or blot away excess material with clean cloth or paper towel. Wash affected areas thoroughly with water. If symptoms develop, seek medical advice.

**Skin contact:** Wipe or blot away excess material with clean cloth or paper towel. Wash affected areas thoroughly with water. If symptoms develop, seek medical advice.

**Ingestion:** Do not induce vomiting without medical advice. Get medical attention.

**Inhalation:** Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

**Note to physician:** Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition. If swallowed a jelly mass may form which in digestion may cause blockage.

#### 5. Fire fighting measures

**Flash point:** > 200 °F / > 93.3 °C (PMCC)

**Extinguishing media:** Foam, Dry powder, Carbon dioxide, Other extinguishing agent suitable for Class B fires. This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Keep containers cool by spraying with water.

**Unsuitable extinguishing media:** Do not use water unless flooding amounts are available.

**Fire and explosion hazard:** May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

**Special protective equipment for fire fighting:** In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

#### 6. Accident release measures

**Personal precautions:** Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Keep people away from and upwind of spill/leak. Ventilate spill area if possible. Spill may be slippery.

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**Methods for cleaning up:** **Small spills:** Water in contact with the product will create a voluminous, slippery gel. Soak up as thoroughly as possible with inert absorbent material or sawdust. Do NOT hose down area until all possible traces of polymer are removed.

**Large spills:** Water in contact with the product will cause slippery floor conditions. Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

**Environmental precautions:** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Prevent material from entering sewers or waterways., If drains, streams, soil or sewers become contaminated, notify local authority.

### 7. Handling and storage

**Handling:** Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled. Stir well prior to use.

**Storage conditions:** Store in suitable labeled containers. Store the containers tightly closed. Store in a cool well ventilated area away from direct sunlight. Protect product from freezing. Store separately from oxidizers.

**Suitable construction material:** Shipping and long term storage compatibility with construction materials can vary; we therefore recommend that compatibility is tested prior to use.

### 8. Exposure controls/personal protection

**Occupational exposure limits:** This product does not contain any substance that has an established exposure limit.

**Engineering measures:** General ventilation is recommended. Use local exhaust ventilation if necessary to control airborne mist and vapor.

**Respiratory protection:** Respiratory protection is not normally needed. Where concentrations in air may exceed the limits given in this section or when significant mists, vapors, aerosols, or dusts are generated, an approved air purifying respirator equipped with suitable filter cartridges is recommended. Consult the respirator / cartridge manufacturer data to verify the suitability of specific devices. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

**Hand protection:** When handling this product, the use of chemical gloves is recommended. The choice of work glove depends on work conditions and what chemicals are handled. Please contact the PPE manufacturer for advice on what type of glove material may be suitable. Gloves should be replaced immediately if signs of degradation are observed.

**Skin protection:** Wear standard protective clothing.

**Eye protection:** Wear chemical splash goggles.

**Hygiene recommendations:** Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

**Human exposure characterization:** Based on our recommended product application and personal protective equipment, the potential human exposure is: Moderate

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### 9. Physical and chemical properties

Physical state: Liquid  
Appearance: Opaque off-white  
Odor: None  
Specific gravity: 1.03 - 1.07 @ 77 °F / 25 °C  
Density: 8.6 - 8.9 lb/gal  
Solubility in water: Emulsifiable  
pH (100.0 %): 3.5 - 4.5  
Viscosity: 200 - 1,500 cps @ 75 °F / 24 °C  
Freezing point: -22 °F / -30 °C  
VOC content: 20.34 % EPA Method 24

**Note:** These physical properties are typical values for this product and are subject to change.

### 10. Stability & reactivity

Stability: Stable under normal conditions.  
Hazardous polymerization: Hazardous polymerization will not occur.  
Conditions to avoid: Freezing temperatures.  
Materials to avoid: Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Addition of water results in gelling.  
Hazardous decomposition products: **Under fire conditions:** Oxides of carbon, Oxides of nitrogen, Oxides of sulfur

### 11. Toxicological information

No toxicity studies have been conducted on this product.

Sensitization: This product is not expected to be a sensitizer.  
Carcinogenicity: None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).  
Human hazard characterization: Based on our hazard characterization, the potential human hazard is: Low

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## 12. Ecological information

**Ecotoxicological effects:** The tests for the product or a similar product were performed in clean water as set forth by USEPA (EPA-821-R-02-012). The toxicity of this product is due to an external mode of action (i.e. suffocation or immobilization). In the presence of suspended material (i.e. DOC), the polymers are bound to suspended material and the bioavailability is substantially reduced. As a result, the toxicity under normal use conditions is expected to be lower. The following results are for the product, unless otherwise indicated.

### Acute fish results:

Species	Exposure	Test type	Value	Test descriptor
Rainbow trout	96 h	LC50	25.7 mg/l	Product tested in clean water

### Acute invertebrate results:

Species	Exposure	Test type	Value	Test descriptor
Ceriodaphnia dubia	48 h	LC50	3.33 mg/l	Product tested in clean water

**Persistency and degradation:** Total

**Organic carbon (TOC):** 2,000 mg/l Chemical

**Oxygen demand:** 8,600 mg/l

### Biological oxygen demand:

Incubation period	Value	Test descriptor
5 d	1,300 mg/l	1% Aqueous solution of product

**Environmental hazard and exposure characterization:** Based on our hazard characterization, the potential environmental hazard is: High  
Based on our recommended product application and the product's characteristics, the potential environmental exposure is: Moderate

If released into the environment, see CERCLA/SUPERFUND in Section 15.

## 13. Disposal instructions

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Dispose of in accordance with the Environmental Protection (Duty of Care) Regulations 1991. Dispose of wastes in an approved incinerator or waste treatment/disposal site, in accordance with all applicable regulations. Do not dispose of wastes in local sewer or with normal garbage.

## 14. Transport information

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

### Land Transport

Proper Shipping Name: Product is not regulated during transportation

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### Air transport (ICAO/IATA)

Proper Shipping Name: Environmentally hazardous substance, liquid, N.O.S.  
Technical Name(s): Cationic polymer  
UN/ID No: UN 3082  
Hazard Class - Primary: 9  
Packing Group: III

### Marine transport (IMDG/IMO)

Proper Shipping Name: Environmentally hazardous substance, liquid, N.O.S.  
Technical Name(s): Cationic polymer  
UN/ID No: UN 3082  
Hazard Class - Primary: 9  
Packing Group: III  
\* Marine pollutant: Cationic polymer

\* **Note:** This product is regulated as a Marine Pollutant when shipped by Rail, Highway (in bulk quantities), or Air (if no other hazard class applies), and when shipped by water in all quantities.

## 15. Regulatory information

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

### NATIONAL REGULATIONS, USA:

#### Osha hazard communication rule, 29 CFR 1910.1200

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

#### Cercla/superfund, 40 CFR 302

Notification of spills of this product is not required.

#### Sara/superfund amendments and reauthorization act of 1986 (Title III) - sections 302, 311, 312, and 313

##### Section 302 - extremely hazardous substances (40 CFR 355)

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

##### Sections 311 and 312 - material safety data sheet requirements (40 CFR 370)

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

**Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.**

##### Section 313 - list of toxic chemicals (40 CFR 372)

This product does not contain substances on the List of Toxic Chemicals.

##### Toxic substances control act (TSCA)

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710).

##### Food and drug administration (FDA) Federal Food, Drug and Cosmetic Act

When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

For use only as a retention and drainage aid employed prior to the sheet forming operation in the manufacture of paper and paperboard and limited to use at a level not to exceed 0.15% by weight (as polymer) of the finished paper and paperboard.

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### NSF international

This product has received NSF/International certification under NSF/ANSI Standard 60 in the coagulation and flocculation category. The official name is "Polyacrylamide." Maximum product application dosage is : 1 mg/l.

### Federal water pollution control act, clean water act, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311

This product contains the following substances listed in the regulation. Additional components may be unintentionally present at trace levels.

### Federal water pollution control act, clean water act, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311

This product contains the following substances listed in the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
Adipic Acid	Sec. 311
Cupric Sulphate	Sec. 307, Sec. 311

### Clean air act, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances)

This product contains the following substances listed in the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
Acrylamide	Sec. 112

### California proposition 65

This product contains the following substances which require warning under California Proposition 65. Additional components may be unintentionally present at trace levels.

Substance(s)	Concentration	Effects
Acrylamide	< .1%	Causes cancer

### Michigan critical materials

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

### State right to know laws

The following substances are disclosed for compliance with State Right to Know Laws:

Sodium Chloride: 7647-14-5  
Water: 7732-18-5  
Hydrotreated Light Distillate: 64742-47-8  
Adipic Acid: 124-04-9  
Acrylamide Modified Polymer: Proprietary  
Ethoxylated C10-16 Alcohols: 68002-97-1

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### INTERNATIONAL CHEMICAL CONTROL LAWS

#### Canadian environmental protection act (CEPA)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

#### Australia

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

#### China

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

#### JAPAN

This product contains substance(s) which are not in compliance with the Law Regulating the Manufacture and Importation Of Chemical Substances and are not listed on the Existing and New Chemical Substances list (ENCS).

#### Korea

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL).

#### Philippines

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

### 16. Other information

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

**The human risk is:** Moderate

**The environmental risk is:** Moderate

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

For additional information on the use of this product, contact your local Archer representative.

### DISCLAIMER STATEMENT

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.



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### REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight™ (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

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