

**Formula F Concentrate**

Version 1.15

Revision Date 2020-11-23

SECTION 1: Identification of the substance/mixture and of the company/undertaking**Product information**

Product Name : Formula F Concentrate
Material : 1095337

Use : Intermediate

Company : Chevron Phillips Chemical Company LP
Drilling Specialties Company LLC
10001 Six Pines Drive
The Woodlands, TX 77380

Emergency telephone:**Health:**

866.442.9628 (North America)

1.832.813.4984 (International)

Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)

Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Mexico CHEMTREC 01-800-681-9531 (24 hours)

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Argentina: +(54)-1159839431

Responsible Department : Product Safety and Toxicology Group
E-mail address : SDS@CPChem.com
Website : www.CPChem.com

SECTION 2: Hazards identification**Classification of the substance or mixture**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Classification

:

Not a hazardous substance or mixture.

Labeling

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Not a hazardous substance or mixture.

Carcinogenicity:**IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3: Composition/information on ingredients

Synonyms : Drilling Mud Additive

Molecular formula : Mixture

| Component | CAS-No. | Weight % |
|------------------------|------------|----------|
| Polymerization bottoms | 64741-71-5 | 85 - 95 |

SECTION 4: First aid measures

General advice : No hazards which require special first aid measures.

If inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact : If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

SECTION 5: Firefighting measures

Flash point : >98°C (>208°F)

Autoignition temperature : No data available

Suitable extinguishing media : Carbon dioxide (CO₂).

Unsuitable extinguishing media : High volume water jet.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

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Further information : For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Fire and explosion protection : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

SECTION 6: Accidental release measures

Environmental precautions : Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage**Handling**

Advice on safe handling : Avoid formation of aerosol. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers : No smoking. Keep in a well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Use : Intermediate

SECTION 8: Exposure controls/personal protection**Engineering measures**

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

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- Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. Air-Purifying Respirator for Organic Vapors, Dusts and Mists. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Flame retardant protective clothing. Footwear protecting against chemicals.
- Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

- Physical state : liquid
 Color : clear, colorless to pale yellow
 Odor : Slight hydrocarbon

Safety data

- Flash point : >98°C (>208°F)
 Lower explosion limit : No data available
 Upper explosion limit : No data available
 Oxidizing properties : no
 Autoignition temperature : No data available
 Molecular formula : Mixture
 Molecular weight : Not applicable
 pH : Not applicable

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| | |
|-----------------------------|--------------------------------|
| Boiling point/boiling range | : No data available |
| Vapor pressure | : No data available |
| Relative density | : 0.78 at 15.6 °C (60.1 °F) |
| Water solubility | : Insoluble |
| Viscosity, kinematic | : 60000 cSt at 25°C (77°F) |
| Relative vapor density | : No data available |
| Evaporation rate | : No data available |

SECTION 10: Stability and reactivity

| | |
|---|--|
| Reactivity | : Stable at normal ambient temperature and pressure. |
| Chemical stability | : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. |
| Possibility of hazardous reactions | |
| Hazardous reactions | : Further information: No decomposition if stored and applied as directed. Hazardous reactions: Vapors may form explosive mixture with air. |
| Conditions to avoid | : Heat, flames and sparks. |
| Materials to avoid | : No data available. |
| Other data | : No decomposition if stored and applied as directed. |

SECTION 11: Toxicological information

| | |
|------------------------------|---------------------------------------|
| Acute oral toxicity | |
| Polymerization bottoms | : LD50: > 5,000 mg/kg Species: Rat |
| Acute dermal toxicity | |
| Polymerization bottoms | : LD50: > 2,000 mg/kg Species: Rat |

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Skin irritation

Polymerization bottoms : May irritate skin. largely based on animal evidence.

Eye irritation

Polymerization bottoms : No eye irritation. largely based on animal evidence.

Sensitization

Polymerization bottoms : Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Polymerization bottoms : No adverse effects expected

Genotoxicity in vitro

Polymerization bottoms : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo

Polymerization bottoms : Test Type: In vivo micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative

Reproductive toxicity

Polymerization bottoms : No adverse effects expected

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Aspiration toxicity**

: No aspiration toxicity classification.

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Further information**

: Solvents may degrease the skin.

SECTION 12: Ecological information**Ecotoxicity effects****Toxicity to fish**

Polymerization bottoms : LL50: > 1,000 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates

Polymerization bottoms : EL50: > 100 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

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static test Method: OECD Test Guideline 202

Toxicity to algae

Polymerization bottoms : EL50: > 1,000 mg/l
 Exposure time: 96 h
 Species: Selenastrum capricornutum (green algae)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Polymerization bottoms : NOEC: 5 mg/l
 Exposure time: 21 d
 Species: Daphnia magna (Water flea)
 static renewal
 Method: OECD Test Guideline 211

Biodegradability

Polymerization bottoms : 0 %
 Testing period: 28 d
 This material is not expected to be readily biodegradable.

Elimination information (persistence and degradability)

Bioaccumulation

Polymerization bottoms : No data available

Mobility : No data available

Results of PBT assessment

Polymerization bottoms : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information : This material is not expected to be harmful to aquatic organisms.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

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- Product : Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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SECTION 15: Regulatory information**National legislation****SARA 311/312 Hazards** : No SARA Hazards

CERCLA Reportable Quantity : This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : This material does not contain any components with a section 302 EHS TPQ.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Components : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

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Pennsylvania Right To Know

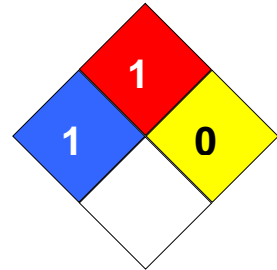
: No components are subject to the Pennsylvania Right to Know Act.

Notification status

Europe REACH : Not in compliance with the inventory
 Switzerland CH INV : Not in compliance with the inventory
 United States of America (USA) TSCA : All substances listed as active on the TSCA inventory
 Canada DSL : All components of this product are on the Canadian DSL
 Australia AICS : On the inventory, or in compliance with the inventory
 New Zealand NZIoC : Not in compliance with the inventory
 Japan ENCS : Not in compliance with the inventory
 Korea KECI : On the inventory, or in compliance with the inventory
 Philippines PICCS : On the inventory, or in compliance with the inventory
 China IECSC : On the inventory, or in compliance with the inventory
 Taiwan TCSI : On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 1
 Fire Hazard: 1
 Reactivity Hazard: 0

**Further information**

Legacy SDS Number : CPC00406

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

| | | | |
|-------|---|-------|--------------------------------------|
| ACGIH | American Conference of Government Industrial Hygienists | LD50 | Lethal Dose 50% |
| AICS | Australia, Inventory of Chemical Substances | LOAEL | Lowest Observed Adverse Effect Level |
| DSL | Canada, Domestic Substances List | NFPA | National Fire Protection Agency |
| NDSL | Canada, Non-Domestic | NIOSH | National Institute for Occupational |

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| | Substances List | | Safety & Health |
|--------|--|-------|--|
| CNS | Central Nervous System | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service | NZIoC | New Zealand Inventory of Chemicals |
| EC50 | Effective Concentration | NOAEL | No Observable Adverse Effect Level |
| EC50 | Effective Concentration 50% | NOEC | No Observed Effect Concentration |
| EGEST | EOSCA Generic Exposure Scenario Tool | OSHA | Occupational Safety & Health Administration |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philippines Inventory of Commercial Chemical Substances |
| MAK | Germany Maximum Concentration Values | PRNT | Presumed Not Toxic |
| GHS | Globally Harmonized System | RCRA | Resource Conservation Recovery Act |
| >= | Greater Than or Equal To | STEL | Short-term Exposure Limit |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reauthorization Act. |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value |
| IECSC | Inventory of Existing Chemical Substances in China | TWA | Time Weighted Average |
| ENCS | Japan, Inventory of Existing and New Chemical Substances | TSCA | Toxic Substance Control Act |
| KECI | Korea, Existing Chemical Inventory | UVCB | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials |
| <= | Less Than or Equal To | WHMIS | Workplace Hazardous Materials Information System |
| LC50 | Lethal Concentration 50% | | |