Liquid Flowzan® Biopolymer XPT

Version 1.7 Revision Date 2023-10-12

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

Product information

Product Name : Liquid Flowzan® Biopolymer XPT
Material : 1095838, 1101333, 1091030

Use : Drilling Fluid Additive

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
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
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)
Belgium: 070 245 245 (24 hours/day, 7 days/week)
Bulgaria: +359 2 9154 233
Croatia: +3851 2348 342 (24 hours/day, 7 days/week)
Cyprus: 1401
Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402
Denmark: Danish Poison Center (Giftlinjen): +45 8212 1212
Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Finland: 0800 147 111 09 471 977 (24 hours/day)
France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)
Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Greece: (0030) 2107793777 (24 hours/day, 7 days/week)
Hungary: +36-80-201-199 (24 hours/day, 7 days/week)
Iceland: 543 2222 (24 hours/day, 7 days/week)
Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Italy: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371 67042473. (24 hours.)
Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Lithuania: +370 (85) 2362052
Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)
Malta: +356 2395 2000
The Netherlands: NVIC: +31 (0)88 755 8000
Norway: 22 59 13 00 (24 hours/day, 7 days/week)
Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Portugal: CIAV phone number: +351 800 250 250
Romania: +40213183606
Slovakia: +421 2 5477 4166
Slovenia: Phone number: 112
Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)
Sweden: 112 – ask for Poisons Information

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

: Flammable liquids, Category 4

Labeling

Signal Word : Warning

Hazard Statements : H227: Combustible liquid.

Precautionary Statements : **Prevention:**
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

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 %
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics		49 - 51

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 skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point : 77°C (171°F)
Method: ASTM D 93

Autoignition temperature : 225°C (437°F)

Unsuitable extinguishing media : High volume water jet.

Specific hazards during fire fighting : Standard procedure for chemical fires.

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

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.

Hazardous decomposition products	:	Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions	:	Use personal protective equipment.
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. Avoid contact with skin and eyes. 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 container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Use	:	Drilling Fluid Additive

SECTION 8: Exposure controls/personal protection

Engineering measures

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

Respiratory protection	:	If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:. Air-Purifying Respirator for Dusts and Mists. A positive pressure, air-supplying respirator may be appropriate 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 according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate:. Safety shoes. Protective suit.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. 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	:	Light brown
Odor	:	Slight

Safety data

Flash point	:	77°C (171°F) Method: ASTM D 93
Lower explosion limit	:	0.6 %(V)
Upper explosion limit	:	5.1 %(V)
Oxidizing properties	:	no
Autoignition temperature	:	225°C (437°F)
Molecular formula	:	Mixture
Molecular weight	:	Not applicable
pH	:	No data available

Pour point	:	No data available
Boiling point/boiling range	:	217.8-237.8°C (424.0-460.0°F)
Vapor pressure	:	No data available
Relative density	:	0.97
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, kinematic	:	79983 mm2/s at 40°C (104°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 : Hazardous reactions: Hazardous polymerization does not occur.

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 : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous decomposition products : Carbon oxides

Other data : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

Acute oral toxicity

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	LD50: > 5,000 mg/kg Species: Rat Sex: male and female Information given is based on data obtained from similar substances.

Acute inhalation toxicity

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	LC50: > 5 mg/l Exposure time: 8 h Species: Rat Sex: male Test atmosphere: vapor Method: OECD Test Guideline 403 Information given is based on data obtained from similar substances.

Acute dermal toxicity

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	LD50: > 5,000 mg/kg Species: Rabbit Sex: male and female Information given is based on data obtained from similar substances.

Skin irritation

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	No skin irritation Information given is based on data obtained from similar substances.

Eye irritation

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	No eye irritation Information given is based on data obtained from similar substances.

Sensitization

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	Did not cause sensitization on laboratory animals. Information given is based on data obtained from similar substances.

Repeated dose toxicity

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	Species: Rat, male and female Sex: male and female Application Route: Inhalation Dose: 0, 2600, 5200, 10400 mg/m3 Exposure time: 90 d Number of exposures: 6h/d; 5d/wk NOEL: 10400 mg/m3 Method: OECD Test Guideline 413 No adverse effects expected Information given is based on data obtained from similar substances.

Genotoxicity in vitro

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	Test Type: Reverse mutation assay Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Remarks: Information given is based on data obtained from similar substances. Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative Remarks: Information given is based on data obtained from similar substances. Test Type: Mouse lymphoma assay Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	Test Type: Dominant lethal assay Species: Rat Route of Application: Inhalation Method: OECD Test Guideline 478 Result: negative Remarks: Information given is based on data obtained from similar substances. Test Type: Micronucleus test Species: Mouse Route of Application: Oral Method: OECD Test Guideline 474 Result: negative Remarks: Information given is based on data obtained from similar substances.

Reproductive toxicity

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	Species: Rat Sex: male and female Application Route: Inhalation Exposure time: 8 wk Number of exposures: 6h/d;5d/wk Method: OECD Guideline 421 NOAEL Parent: 1720 mg/m3 NOAEL F1: 1720 mg/m3 Fertility and developmental toxicity tests did not reveal any effect on reproduction. Information given is based on data obtained from similar substances.

Developmental Toxicity

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	Species: Rat Application Route: Inhalation Exposure time: 6h/d;5d/wk Number of exposures: daily Test period: GD 6-15 Method: OECD Guideline 414 NOAEL Teratogenicity: 5220 mg/m3 NOAEL Maternal: 5220 mg/m3 Animal testing did not show any effects on fetal development. Information given is based on data obtained from similar substances.

Liquid Flowzan® Biopolymer XPT
Aspiration toxicity : No aspiration toxicity classification.

Liquid Flowzan® Biopolymer XPT
Further information : Solvents may degrease the skin.

SECTION 12: Ecological information

Ecotoxicity effects

Toxicity to fish	:	LL0: 1,000 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) semi-static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL0: 1,000 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
Toxicity to algae	:	EL50: > 1,000 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) static test Method: OECD Test Guideline 201
Biodegradability	:	Expected to be biodegradable

Elimination information (persistence and degradability)

Bioaccumulation

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	The product may be accumulated in organisms.

Mobility

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	After release, disperses into the air.
Additional ecological	:	This material is not expected to be harmful to aquatic

information 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.

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.

Testing (ASTM D4206) has shown product does not sustain combustion.

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.

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards	:	Fire Hazard
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	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
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 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know	:	No components are subject to the Pennsylvania Right to Know Act.
California Prop. 65 Components	:	This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

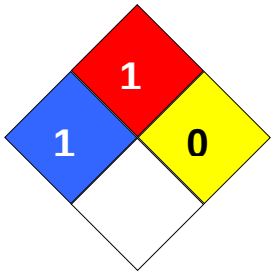
Europe REACH	:	This product is in full compliance according to REACH regulation 1907/2006/EC.
Switzerland CH INV	:	Not in compliance with the inventory
United States of America (USA) TSCA	:	Not On TSCA Inventory
Canada DSL	:	This product contains one or several components that are not on the Canadian DSL nor NDSL.
Australia AIIC	:	Not in compliance with the inventory
New Zealand NZIoC	:	Not in compliance with the inventory
Japan ENCS	:	Not in compliance with the inventory
Korea KECI	:	Not in compliance with the inventory
Philippines PICCS	:	Not in compliance with the inventory
China IECSC	:	Not in compliance with the inventory
Taiwan TCSI	:	Not in compliance with the inventory

For export from the U.S. only

SECTION 16: Other information

For export from the U.S. only

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



Further information

Legacy SDS Number : E303

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%
AIIC	Australian Inventory of Industrial Chemicals	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational 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%	ATE	Acute toxicity estimate