



HEC Liquid Polymer

Version 1.19

Revision Date 2023-09-20

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

Product information

Product Name : HEC Liquid Polymer
 Material : 1114125, 1101269, 1016918

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 (Gifftlinjen): +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)

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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
 Aspiration hazard, Category 1

Labeling

Symbol(s) :



Signal Word : Danger

Hazard Statements : H227: Combustible liquid.
 H304: May be fatal if swallowed and enters airways.

Precautionary Statements : **Prevention:**
 P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
 P280 Wear protective gloves/ eye protection/ face protection.
Response:
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P331 Do NOT induce vomiting.
 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.
 P405 Store locked up.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

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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
Liquid HEC Polymer
HEC 25 Liquid Polymer

Molecular formula : Mixture

Component	CAS-No.	Weight %
Distillates (petroleum), hydrotreated light	64742-47-8	0 - 60
C12-C14 Isoalkanes	68551-19-9	0 - 60
Polymerization bottoms	64741-71-5	0 - 60

SECTION 4: First aid measures

General advice : Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled : Call a physician or poison control center immediately. If unconscious, place in recovery position and seek medical advice.

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 : 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. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

Notes to physician

Risks : May be fatal if swallowed and enters airways.

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SECTION 5: Firefighting measures

Flash point	:	>79.4°C (>174.9°F) Method: Tag closed cup
Suitable extinguishing media	:	Carbon dioxide (CO ₂).
Unsuitable extinguishing media	:	High volume water jet.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
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.

SECTION 6: Accidental release measures

Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation.
Environmental precautions	:	Prevent product from entering drains. 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. Do not breathe vapors/dust. 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

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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 : Drilling Fluid Additive

SECTION 8: Exposure controls/personal protection**Ingredients with workplace control parameters****Chevron Phillips Chemical Company LP**

Components	Basis	Value	Control parameters	Note
C12-C14 Isoalkanes	Manufacturer	TWA	1,200 mg/m3	RCP,

RCP Reciprocal Calculation Procedure

US

Components	Basis	Value	Control parameters	Note
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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

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 Organic Vapors, 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 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 : When using do not eat or drink. When using do not smoke.

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Wash hands before breaks and immediately after handling the product.

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

Form	: liquid
Physical state	: liquid
Color	: Opaque
Odor	: Hydrocarbon
Odor Threshold	: No data available

Safety data

Flash point	: >79.4°C (>174.9°F) Method: Tag closed cup
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Molecular formula	: Mixture
Molecular weight	: Not applicable
pH	: 7
Pour point	: No data available
Initial boiling point and boiling range	: 217°C (423°F)
Vapor pressure	: 0.70 MMHG at 37.8°C (100.0°F)
Relative density	: 0.78 at 15.6 °C (60.1 °F)
Water solubility	: negligible
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 2.6 cSt at 38°C (100°F)
Relative vapor density	: 3
Evaporation rate	: 0.01

SECTION 10: Stability and reactivity

Reactivity : Stable at normal ambient temperature and pressure.

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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**

Distillates (petroleum), hydrotreated light : LD50: > 15,000 mg/kg
Species: Rat
Sex: male and female
Method: OECD Test Guideline 423
Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes : LD50: > 5,000 mg/kg
Species: Rat
Sex: male and female
Method: OECD Test Guideline 401
Information given is based on data obtained from similar substances.

Polymerization bottoms : LD50: > 5,000 mg/kg
Species: Rat

Acute inhalation toxicity

Distillates (petroleum), hydrotreated light : LC50: > 4.9 mg/l
Exposure time: 4 h
Species: Rat
Sex: male and female
Test atmosphere: vapor
Method: OECD Test Guideline 403
Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes : LC50: > 4.9 mg/l
Exposure time: 4 h
Species: Rat
Sex: male and female

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Test atmosphere: vapor
 Method: OECD Test Guideline 403
 An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.
 Information given is based on data obtained from similar substances.

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Acute dermal toxicity**

: Acute toxicity estimate: 2,083 mg/kg
 Method: Calculation method

Skin irritation

Distillates (petroleum),
 hydrotreated light

: No skin irritation
 Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes

May irritate skin. Information given is based on data obtained from similar substances.

Polymerization bottoms

May irritate skin. largely based on animal evidence.

Eye irritation

Distillates (petroleum),
 hydrotreated light

: No eye irritation
 Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes

No eye irritation
 Information given is based on data obtained from similar substances.

Polymerization bottoms

No eye irritation. largely based on animal evidence.

Sensitization

Distillates (petroleum),
 hydrotreated light

: Does not cause skin sensitization.
 Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes

Did not cause sensitization on laboratory animals.
 Information given is based on data obtained from similar substances.

Polymerization bottoms

Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Distillates (petroleum),
 hydrotreated light

: Species: Rat, male and female
 Sex: male and female
 Application Route: oral gavage
 Dose: 25, 150, 1000 mg/kg/d
 NOEL: > 1,000 mg/kg
 Method: OECD Test Guideline 422
 Information given is based on data obtained from similar substances.

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	<p>Species: Rat, male and female Sex: male and female Application Route: Inhalation Dose: 2600, 5200, 10400 mg/m³ Exposure time: 13 wk Number of exposures: 6 h/d, 5 d/wk NOEL: > 10400 mg/m³ Method: OECD Test Guideline 413 Information given is based on data obtained from similar substances.</p>
C12-C14 Isoalkanes	<p>Species: Rat, male and female Sex: male and female Application Route: oral gavage Dose: 100, 500, 1000 mg/kg/d Exposure time: 13 wk Number of exposures: daily NOEL: > 1000 mg/kg/d Method: OECD Test Guideline 408 No adverse effects expected Information given is based on data obtained from similar substances.</p>
	<p>Species: Rat, male and female Sex: male and female Application Route: Inhalation Dose: 2600, 5200, 10400 mg/m³ Exposure time: 90 d Number of exposures: 6 h/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.</p>
Polymerization bottoms	No adverse effects expected
Genotoxicity in vitro	
Distillates (petroleum), hydrotreated light	<p>: Test Type: Ames test 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.</p>

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	<p>Test Type: Chromosome aberration test in vitro Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Remarks: Information given is based on data obtained from similar substances.</p> <p>Test Type: In vitro mammalian cell gene mutation test 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.</p>
C12-C14 Isoalkanes	<p>Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative</p> <p>Test Type: Mouse lymphoma assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative</p> <p>Test Type: Sister Chromatid Exchange Assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative</p>
Polymerization bottoms	<p>Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative</p>
Genotoxicity in vivo	
Distillates (petroleum), hydrotreated light	<p>: Test Type: Micronucleus test Species: Mouse Method: OECD Test Guideline 474 Result: negative Remarks: Information given is based on data obtained from similar substances.</p> <p>Test Type: Dominant lethal assay Method: OECD Test Guideline 478 Result: negative Remarks: Information given is based on data obtained from similar substances.</p>
C12-C14 Isoalkanes	<p>Test Type: dominant lethal test Species: Rat Route of Application: Intraperitoneal injection Dose: 300, 900 ppm Method: OECD Test Guideline 478 Remarks: Information given is based on data obtained from similar substances.</p>
Polymerization bottoms	<p>Test Type: In vivo micronucleus test Species: Mouse</p>
SDS Number:100000013691	10/18

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Method: OECD Test Guideline 474
Result: negative

Reproductive toxicity

Distillates (petroleum), hydrotreated light : No adverse effects expected
Information given is based on data obtained from similar substances.

Polymerization bottoms No adverse effects expected

Developmental Toxicity

Distillates (petroleum), hydrotreated light : No adverse effects expected
Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes
Species: Rat
Application Route: Inhalation
Dose: 0, 400, 1200 ppm
Exposure time: 6h
Test period: GD 6-15
NOAEL Teratogenicity: 1200 ppm
NOAEL Maternal: 1200 ppm
Information given is based on data obtained from similar substances.

Species: Rat
Application Route: Inhalation
Dose: 300, 900 ppm
Exposure time: 6h
Test period: GD 6-15
NOAEL Teratogenicity: >= 900 ppm
NOAEL Maternal: >= 900 ppm
Information given is based on data obtained from similar substances.

Aspiration toxicity

Distillates (petroleum), hydrotreated light : May be fatal if swallowed and enters airways.

C12-C14 Isoalkanes May be fatal if swallowed and enters airways.
Polymerization bottoms May be fatal if swallowed and enters airways.

CMR effects

C12-C14 Isoalkanes : Carcinogenicity: Not available
Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show mutagenic effects
Teratogenicity: Animal testing did not show any effects on fetal development.
Reproductive toxicity: Animal testing did not show any effects on fertility.

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Further information**

: Solvents may degrease the skin.

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

Distillates (petroleum), hydrotreated light : LL50: > 88,444 mg/l
 Exposure time: 96 h
 Species: Oncorhynchus mykiss (rainbow trout)
 static test Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes LL50: > 1,000 mg/l
 Exposure time: 96 h
 Species: Oncorhynchus mykiss (rainbow trout)
 semi-static test Method: OECD Test Guideline 203
 Information given is based on data obtained from similar substances.

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

Toxicity to daphnia and other aquatic invertebrates

Distillates (petroleum), hydrotreated light : EL50: > 1,000 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 static test Method: OECD Test Guideline 202
 Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes EL50: > 1,000 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 static test Method: OECD Test Guideline 202
 Information given is based on data obtained from similar substances.

Polymerization bottoms EL50: > 100 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 static test Method: OECD Test Guideline 202

Toxicity to algae

Distillates (petroleum), hydrotreated light : EL50: > 1,000 mg/l
 Exposure time: 72 h
 Species: Pseudokirchneriella subcapitata (algae)
 Growth inhibition Method: OECD Test Guideline 201
 Information given is based on data obtained from similar substances.

C12-C14 Isoalkanes EL50: > 1,000 mg/l
 Exposure time: 72 h
 Species: Pseudokirchneriella subcapitata (green algae)
 Growth inhibition Method: OECD Test Guideline 201
 Information given is based on data obtained from similar

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substances.

Polymerization bottoms

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

Toxicity to fish (Chronic toxicity)Distillates (petroleum),
hydrotreated light

: NOELR: > 1,000 mg/l
 Exposure time: 28 d
 Method: QSAR modeled data

C12-C14 Isoalkanes

No data available:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)Distillates (petroleum),
hydrotreated light

: NOELR: 1 mg/l
 Exposure time: 21 d
 Species: Daphnia magna (Water flea)
 semi-static test
 Method: OECD Test Guideline 211
 Information given is based on data obtained from similar
 substances.

Polymerization bottoms

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

Biodegradability

Distillates (petroleum),
hydrotreated light

: aerobic
 Result: Readily biodegradable.
 68 %
 Testing period: 28 d
 Information given is based on data obtained from similar
 substances.

C12-C14 Isoalkanes

: aerobic
 Result: Readily biodegradable.
 89.8 %
 Testing period: 28 d
 Method: OECD Test Guideline 301F
 Information given is based on data obtained from similar
 substances.

Polymerization bottoms

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

Bioaccumulation

Distillates (petroleum),
hydrotreated light

: This material is not expected to bioaccumulate.

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C12-C14 Isoalkanes	:	The product may be accumulated in organisms.
Polymerization bottoms	:	No data available
 Mobility		
Distillates (petroleum), hydrotreated light	:	No data available
C12-C14 Isoalkanes	:	immobile
Polymerization bottoms	:	No data available
 Results of PBT assessment		
C12-C14 Isoalkanes	:	Non-classified PBT substance, Non-classified vPvB substance
Polymerization bottoms	:	Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information	:	No data available
Ecotoxicology Assessment		
 Short-term (acute) aquatic hazard		
Distillates (petroleum), hydrotreated light	:	This material is not expected to be harmful to aquatic organisms.
C12-C14 Isoalkanes	:	This material is not expected to be harmful to aquatic organisms.
Polymerization bottoms	:	This material is not expected to be harmful to aquatic organisms.
 Long-term (chronic) aquatic hazard		
Distillates (petroleum), hydrotreated light	:	This material is not expected to be harmful to aquatic organisms.
C12-C14 Isoalkanes	:	This material is not expected to be harmful to aquatic organisms.
Polymerization bottoms	:	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.
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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)

NA1993, COMBUSTIBLE LIQUID, N.O.S., (DISTILLATES (PETROLEUM), HYDROTREATED LIGHT, C12-C14 ISOALKANES), III

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**

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- SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)
Aspiration 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 : 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 SOCM1 Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know

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: C12-C14 Isoalkanes - 68551-19-9
 Distillates (petroleum), hydrotreated light - 64742-47-8
 Polymerization bottoms - 64741-71-5
 Cellulose, 2-Hydroxyethyl Ether - 9004-62-0

California Prop. 65
 Components

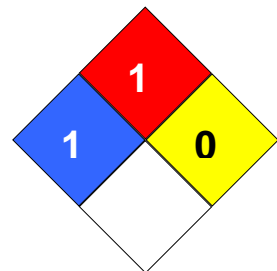
: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

Europe REACH	:	Not in compliance with the inventory
Switzerland CH INV	:	Not in compliance with the inventory
United States of America (USA) TSCA	:	On or in compliance with the active portion of the TSCA inventory
Canada DSL	:	All components of this product are on the Canadian DSL
Australia AIIC	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s).
Philippines PICCS	:	Not in compliance with the inventory
Taiwan TCSI	:	On the inventory, or in compliance with the inventory
China IECSC	:	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 : 297870

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

HEC Liquid Polymer

Version 1.19

Revision Date 2023-09-20

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