SAFETY DATA SHEET

Pipe Free™ Spotting Fluid

Version 3.1 Revision Date 2016-09-09

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

Product information

Product Name : Pipe Free™ Spotting Fluid
Material : 1106563

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: +800 CHEMCALL (+800 2436 2255) China:+86-21-22157316
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

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.

Emergency Overview

Danger

Physical state: Liquid **Color**: dark

OSHA Hazards : Combustible Liquid, Corrosive to skin, Corrosive to eyes

Classification

: Flammable liquids, Category 4
Skin corrosion, Category 1C
Serious eye damage, Category 1
Skin sensitization, Category 1

Labeling

Symbol(s) :

Signal Word : Danger

Hazard Statements : H227: Combustible liquid.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
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.

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

Molecular formula : Mixture

Component	CAS-No.	Weight %
Modified Amidoamine	68990-47-6	30 - 60
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics		0 - 30
Dipropylene Glycol Methyl Ether	34590-94-8	1 - 2.5
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	1 - 2.5

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.

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

In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. 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.

SECTION 5: Firefighting measures

Flash point : 75 °C (167 °F)

Suitable extinguishing media : Carbon dioxide (CO2).

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	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. 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 an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

SECTION 6: Accidental release measures

Personal precautions	:	Use personal protective equipment.
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. Avoid exposure - obtain special instructions before use. 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. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire and explosion	:	Do not spray on an open flame or any other 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. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

US

Ingredients	Basis	Value	Control parameters	Note
Dipropylene Glycol Methyl Ether	ACGIH	TWA	100 ppm,	CNS impair, URT irr, eye irr, Skin,
	ACGIH	STEL	150 ppm,	CNS impair, URT irr, eye irr, Skin,
	OSHA Z-1	TWA	100 ppm, 600 mg/m3	X, (b),
	OSHA Z-1-A	TWA	100 ppm, 600 mg/m3	X,
	OSHA Z-1-A	STEL	150 ppm, 900 mg/m3	X,

(b) The value in mg/m3 is approximate.
CNS impair Central Nervous System impairment
eye irr Eye irritation
Skin Danger of cutaneous absorption
URT irr Upper Respiratory Tract irritation
X Skin notation

Hazardous components without workplace control parameters

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Dipropylene Glycol Methyl Ether	34590-94-8	Immediately Dangerous to Life or Health Concentration Value 600 ppm	1995-03-01

Engineering measures

Adequate ventilation to control airborned 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	:	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:. Full-Face Air-Purifying Respirator for Organic Vapors, Dusts and Mists. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, 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:. Complete head face and neck protection. Rubber apron. Footwear protecting against chemicals.
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	:	dark

Safety data

Flash point	:	75 °C (167 °F)
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Molecular formula	:	Mixture
Molecular weight	:	Not applicable
Boiling point/boiling range	:	> 200 °C (> 392 °F)
Density	:	1 g/cm3
Water solubility	:	Insoluble in water, soluble in oil.
Viscosity, kinematic	:	> 200 cSt at 40 °C (104 °F)

SECTION 10: Stability and reactivity

Chemical stability	:	This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid	:	Heat, flames and sparks.
Other data	:	No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

Pipe Free™ Spotting Fluid
Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	LC50: > 5 mg/l Exposure time: 8 h Species: Rat Test atmosphere: vapor Method: OECD Test Guideline 403

Acute dermal toxicity

Modified Amidoamine	:	No data available
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics		LD50: > 5,000 mg/kg Species: Rabbit
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.		LD50: > 5,000 mg/kg Species: Rat

Pipe Free™ Spotting Fluid
Skin irritation : Extremely corrosive and destructive to tissue.

Pipe Free™ Spotting Fluid
Eye irritation : May cause irreversible eye damage.

Pipe Free™ Spotting Fluid
Sensitization : Causes sensitization.

Repeated dose toxicity

Modified Amidoamine	:	Species: Rat, male and female Sex: male and female Application Route: oral gavage Dose: 0, 10, 30, 100 mg/kg bw Exposure time: 13 wk Number of exposures: daily NOEL: 10 mg/kg Method: OECD Test Guideline 408 Target Organs: Immune system No significant adverse effects were reported Information given is based on data obtained from similar substances.

Reproductive toxicity

Modified Amidoamine : Species: Rat
Sex: male
Application Route: oral gavage
Dose: 10, 20, 100 mg/kg/d
Exposure time: 28 d
Number of exposures: daily
Method: OECD Guideline 422
NOAEL Parent: 30 mg/kg
NOAEL F1: >= 100 mg/kg
Information given is based on data obtained from similar substances.

Species: Rat
Sex: female
Application Route: oral gavage
Dose: 10, 20, 100 mg/kg/d
Exposure time: 42 d
Number of exposures: daily
Method: OECD Guideline 422
NOAEL Parent: 30 mg/kg
NOAEL F1: >= 100 mg/kg
Information given is based on data obtained from similar substances.

Developmental Toxicity

Modified Amidoamine : Species: Rat
Application Route: oral gavage
Dose: 0, 15, 50, 150 mg/kg bw/day
Number of exposures: Daily
Test period: GD6-19
Method: OECD Guideline 414
NOAEL Teratogenicity: 150 mg/kg
NOAEL Maternal: 50 mg/kg
No adverse effects expected
Information given is based on data obtained from similar substances.

Pipe Free™ Spotting Fluid
Aspiration toxicity : No aspiration toxicity classification.

Pipe Free™ Spotting Fluid
Further information : No data available.

SECTION 12: Ecological information

Toxicity to fish

Modified Amidoamine : LC50: 0.19 mg/l
Exposure time: 96 h
Species: Danio rerio (Zebra Fish)
semi-static test Method: OECD Test Guideline 203
Information given is based on data obtained from similar substances.

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	LL0: 1,000 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates

Modified Amidoamine	:	EC50: 0.18 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.
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics		EL0: 1,000 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)

Toxicity to algae

Modified Amidoamine	:	EC50: 0.505 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 substances.
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics		EL50: 1,000 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae)

Toxicity to bacteria

Modified Amidoamine	:	EC50: 175 mg/l Exposure time: 3 h Species: Bacteria Respiration inhibition Method: OECD Test Guideline 209

Biodegradability

Modified Amidoamine	:	aerobic 24 % Testing period: 28 d Method: OECD Test Guideline 301D This material is not expected to be readily biodegradable. Expected to be inherently biodegradable. Information given is based on data obtained from similar substances.
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclic, <2% aromatics	:	69 % This material is expected to be readily biodegradable.
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	:	aerobic Result: Readily biodegradable. 94 %

Testing period: 28 d
Method: OECD Test Guideline 301A

Ecotoxicology Assessment

Acute aquatic toxicity Modified Amidoamine	:	Very toxic to aquatic life.
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity Modified Amidoamine	:	Very toxic to aquatic life with long lasting effects.
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	:	Harmful to aquatic life with long lasting effects.
Additional ecological information	:	Toxic to aquatic life with long lasting effects.

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	:	The product should not be allowed to enter drains, water courses or the soil. 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)
UN1760, CORROSIVE LIQUIDS, N.O.S., (MODIFIED AMIDOAMINE), 8, III

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
UN1760, CORROSIVE LIQUID, N.O.S., (MODIFIED AMIDOAMINE), 8, III, (75 °C), MARINE POLLUTANT, (MODIFIED AMIDOAMINE)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN1760, CORROSIVE LIQUID, N.O.S., (MODIFIED AMIDOAMINE), 8, III

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
UN1760, CORROSIVE LIQUID, N.O.S., (MODIFIED AMIDOAMINE), 8, III, (E), ENVIRONMENTALLY HAZARDOUS, (MODIFIED AMIDOAMINE)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
UN1760, CORROSIVE LIQUID, N.O.S., (MODIFIED AMIDOAMINE), 8, III, ENVIRONMENTALLY HAZARDOUS, (MODIFIED AMIDOAMINE)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN1760, CORROSIVE LIQUID, N.O.S., (MODIFIED AMIDOAMINE), 8, III, ENVIRONMENTALLY HAZARDOUS, (MODIFIED AMIDOAMINE)

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

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW

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 Ingredients : 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
: Dipropylene Glycol Methyl Ether - 34590-94-8

New Jersey Right To Know
: Dipropylene Glycol Methyl Ether - 34590-94-8

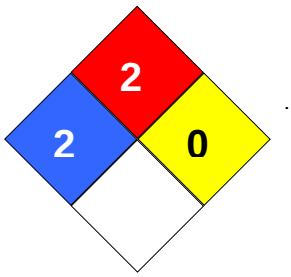
California Prop. 65 Ingredients : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

Europe REACH	:	Not in compliance with the inventory
United States of America TSCA	:	Not in compliance with the inventory
Canada DSL	:	Not in compliance with the inventory
Australia AICS	:	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

SECTION 16: Other information

NFPA Classification : Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 0



Further information

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 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	TSCA	Toxic Substance Control Act

	New Chemical Substances		
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%		