

SAFETY DATA SHEET



Soltex® E Additive

Version 1.8

Revision Date 2017-02-28

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

Product information

Product Name : Soltex® E Additive
Material : 1110476

EC-No.Registration number

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
Asphalt, Sulfonated, Sodium Salt	68201-32-1 269-212-0	Chevron Phillips Chemicals International NV 01-2119510713-49-0000

Relevant Identified Uses Supported : Use in Oil and Gas field drilling and production operations - Industrial

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

Local : Chevron Phillips Chemicals International N.V.
Airport Plaza (Stockholm Building)
Leonardo Da Vincilaan 19
1831 Diegem
Belgium

SDS Requests: (800) 852-5530
Technical Information: (832) 813-4862
Responsible Party: Product Safety Group
Email:sds@cpchem.com

Emergency telephone:

Health:

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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)

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

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****REGULATION (EC) No 1272/2008**

Not a hazardous substance or mixture.

Label elements**Labeling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

SECTION 3: Composition/information on ingredientsSynonyms : DRILLING MUD ADDITIVE
Shale Inhibitor

Molecular formula : UVCB

Contains no hazardous ingredients according to GHS. :

Remarks : Contains no hazardous ingredients according to GHS.

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 eye contact : Remove contact lenses. Protect unharmed eye. 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.

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SECTION 5: Firefighting measures

Flash point	:	Not applicable
Autoignition temperature	:	No data available
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire and explosion protection	:	Provide appropriate exhaust ventilation at places where dust is formed.

SECTION 6: Accidental release measures

Personal precautions	:	Avoid dust formation.
Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities.
Methods for cleaning up	:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage**Handling**

Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Advice on protection against fire and explosion	:	Provide appropriate exhaust ventilation at places where dust is formed.

Storage

Requirements for storage areas and containers	:	Electrical installations / working materials must comply with the technological safety standards.
Advice on common storage	:	No materials to be especially mentioned.

SECTION 8: Exposure controls/personal protection

DNEL	:	End Use: Workers Routes of exposure: Skin contact Potential health effects: Chronic effects, Systemic effects Value: 14,3 mg/kg
DNEL	:	End Use: Workers Routes of exposure: Inhalation Potential health effects: Chronic effects, Systemic effects

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Value: 25,2 mg/m³

PNEC : Marine water
Value: 0,12 mg/l

PNEC : Marine sediment
Value: 0,097 mg/kg

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 : 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 Dusts and Mists / P100. 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. Safety glasses.

Skin and body protection : Wear as appropriate: Choose body protection according to the amount and concentration of the dangerous substance at the work place. Lightweight protective clothing.

Hygiene measures : General industrial hygiene practice.

For additional details, see the Exposure Scenario in the Annex portion

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

Form : Powder
Physical state : Solid

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Color : Dark Brown, Black
 Odor : No odor
 Odor Threshold : Not applicable

Safety data

Flash point : Not applicable

Lower explosion limit : Not applicable

Upper explosion limit : Not applicable

Autoignition temperature : No data available

Thermal decomposition : No data available

Molecular formula : UVCB

pH : 7 - 10

Boiling point/boiling range : Not applicable

Vapor pressure : Not applicable

Relative density : Not applicable

Density : 1,54 g/cm³

Water solubility : Partly soluble

Partition coefficient: n-octanol/water : No data available

Viscosity, kinematic : No data available

Relative vapor density : Not applicable

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 : No data available.

Thermal decomposition : No data available

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

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SECTION 11: Toxicological information**Soltex® E Additive**

Acute oral toxicity : LD50: > 5.000 mg/kg
Species: Rat
Sex: male and female

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Acute inhalation toxicity : LC50: > 5,3 mg/l
Exposure time: 4 h
Species: Rat
Sex: male and female
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Rats exposed to a 5.3 mg/L dust aerosol for 4-hr resulted in effects generally expected with high concentrations of dust aerosols made of relatively dense particles. Higher lung weight and atelectasis persisted after the 14-day recovery period. There were no reports of lethality or any significant clinical observations. There was however an acute inflammatory response with evidence of recovery after 14-days. The presence of particulate matter with indication of partial clearance from the lung after the 14-day recovery period was noted. These effects would not be expected during normal operating conditions when using this substance.

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Acute dermal toxicity : No data available

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Skin irritation : No skin irritation

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Eye irritation : No eye irritation

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Sensitization : Did not cause sensitization on laboratory animals.

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Repeated dose toxicity : Species: Rat, male and female
Sex: male and female
Application Route: oral gavage
Dose: 0, 250, 500, 1000 mg/kg
Exposure time: 43 - 54 D
Number of exposures: daily
NOEL: 1.000 mg/kg
Method: OECD Guideline 422

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Reproductive toxicity : Species: Rat
Sex: male and female

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Application Route: oral gavage
 Dose: 0, 250, 500, 1000 mg/kg
 Exposure time: 43-54 D
 Number of exposures: daily
 Method: OECD Guideline 422
 NOAEL Parent: 1.000 mg/kg
 NOAEL F1: 1.000 mg/kg

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Developmental Toxicity**

: Species: Rat
 Application Route: oral gavage
 Dose: 0, 250, 500, 1000 mg/kg
 Number of exposures: daily
 Test period: 54 D
 NOAEL Teratogenicity: 1.000 mg/kg
 NOAEL Maternal: 1.000 mg/kg

Toxicology Assessment**Soltex® E Additive
CMR effects**

: Carcinogenicity:
 Not available
 Mutagenicity:
 Tests on bacterial or mammalian cell cultures 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.

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

: LC50: > 240 mg/l
 Exposure time: 96 h
 Species: Scophthalmus maximus (Flatfish, Flounder)
 semi-static test Method: OECD Test Guideline 203

**Toxicity to daphnia and
other aquatic invertebrates**

: LC50: 380 mg/l
 Exposure time: 48 h
 Species: Acartia tonsa (Marine Copepod)
 static test Method: ISO TC147/SC5/WG2

Toxicity to algae

: EbC50: 240 mg/l
 Exposure time: 72 h
 Species: Skeletonema costatum (Marine Algae)
 static test Method: ISO 10253

 ErC50: 390 mg/l
 Exposure time: 72 h
 Species: Skeletonema costatum (Marine Algae)
 static test Method: ISO 10253

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Elimination information (persistence and degradability)

Biodegradability : 3 %
Testing period: 28 d
Method: Closed Bottle test
According to the results of tests of biodegradability this product is not readily biodegradable.

Ecotoxicology Assessment

Additional ecological information : 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.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

For additional details, see the Exposure Scenario in the Annex portion

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.

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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

SECTION 15: Regulatory information**National legislation****Chemical Safety Assessment**

Ingredients : Asphalt, 269-212-0
sulfonated, sodium
salt

Major Accident Hazard Legislation : 96/82/EC Update: 2003
Directive 96/82/EC does not apply

Water contaminating class (Germany) : WGK 1 slightly water endangering
Classification according VwVwS, Annex 3.

Other Registrations

Regulation Registration number
Danish PR number: 2318865

Notification status

Europe REACH : This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH).
United States of America (USA) : On TSCA Inventory
TSCA
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 : On the inventory, or in compliance with the inventory
Korea KECI : On the inventory, or in compliance with the inventory

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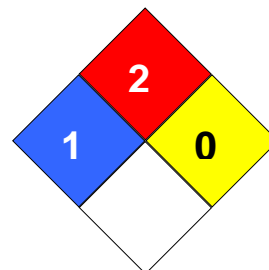
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Philippines PICCS : On the inventory, or in compliance with the inventory
 China IECSC : On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 1
 Fire Hazard: 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

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	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%		

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Annex**1. Short title of Exposure Scenario: Use in Oil and Gas field drilling and production operations - Industrial**

Main User Groups	:	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	SU2b: Offshore industries
Process category	:	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
Environmental release category	:	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Further information	:	Oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.

2.1 Contributing scenario controlling environmental exposure for:ERC4: Industrial use of processing aids in processes and products, not becoming part of articles**Product characteristics**

Remarks : Substance is complex UVCB.

Other given operational conditions affecting environmental exposure

Continuous use/release

Technical conditions and measures / Organizational measures

Remarks : Not applicable

Conditions and measures related to municipal sewage treatment plant

Remarks : Not applicable as there is no release to wastewater.

Conditions and measures related to external treatment of waste for disposal

Waste treatment : Drilling muds are recycled and reused

Conditions and measures related to external recovery of waste

Remarks : Drilling muds are recycled and reused

2.2 Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises**Product characteristics**

Remarks : Substance is complex UVCB.

Physical Form (at time of use) : Solid, low dustiness

Frequency and duration of use

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Frequency of use : 3 hours/day

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor, Outdoor
 Remarks : Assumes a good basic standard of occupational hygiene is implemented., Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Technical conditions and measures

Provide adequate ventilation., Bags of dry powder should be emptied into hopper and pulled down by Venturi effect to minimize dust in the air., Hoppers should be regularly washed down with water to rinse any residual product., Empty bags into hopper when facing downwind.

Conditions and measures related to personal protection, hygiene and health evaluation

Respirator with a dust filter, Wear protective gloves/ protective clothing/ eye protection/ face protection.

3. Exposure estimation and reference to its source**Environment**

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Value type	Level of Exposure	Risk characterization ratio
ERC4	EGEST		Marine water		0,0005 mg/L	0,00413
			Marine sediment		31,4 mg/L	0,598

ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

Workers/Consumers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterization ratio
PROC4	ECETOC TRA		Worker – dermal, long-term – systemic	6,86 mg/kg/d	0,480
			Worker – inhalation, long-term – systemic	0,420 mg/m ³	0,017
			Worker – long-term – systemic Combined routes		0,497

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterization ratios are expected to be less than 1.
 When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1
 Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.