

SAFETY DATA SHEET



Soltex® Additive

Version 4.0

Revision Date 2016-06-17

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

Product information

Product Name : Soltex® Additive
Material : 1079530, 1016807

Use : Drilling Mud 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: +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

Form: Powder Physical state: Solid Color: Black Odor: No odor
OSHA Hazards : Combustible dust, Carcinogen

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

Classification

: Combustible dust
Carcinogenicity, Category 1A

Labeling

Symbol(s)

:



Signal Word

: Danger

Hazard Statements

: May form combustible dust concentrations in air.
H350: May cause cancer.

Precautionary Statements

: **Prevention:**
P261 Avoid breathing dust.
P281 Use personal protective equipment as required.

Potential Health Effects

Physical Hazards

: Mechanical processing may form combustible dust concentrations in air and thermal processing at elevated temperatures may generate simple hydrocarbons and carbon oxides.

Carcinogenicity:**IARC**

Group 1: Carcinogenic to humans

Crystalline Silica 14808-60-7

NTP

Known to be human carcinogen

Crystalline Silica 14808-60-7

ACGIH

Suspected human carcinogen

Crystalline Silica 14808-60-7

SECTION 3: Composition/information on ingredients

Synonyms

: Drilling Mud Additive

Molecular formula

: Mixture

Component	CAS-No.	Weight %
Acid modified petroleum residuum	Proprietary	60 - 70
Crystalline Silica	14808-60-7	0.1 - 1

SECTION 4: First aid measures

General advice

: Move out of dangerous area. Show this material safety data

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

- 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 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.

SECTION 5: Firefighting measures

- Flash point : Not applicable
- Autoignition temperature : Not applicable
- Unsuitable extinguishing media : High volume water jet.
- Specific hazards during fire fighting : Risks of ignition followed by flame propagation or secondary explosions can be caused by the accumulation of dust, e.g. on floors and ledges.
- 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 : Avoid dust formation. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Provide appropriate exhaust ventilation at places where dust is formed.
- Hazardous decomposition products : Carbon oxides. Sulfur oxides.

SECTION 6: Accidental release measures

- Personal precautions : Use personal protective equipment. Avoid dust formation. Avoid breathing dust.
- 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 : Pick up and arrange disposal without creating dust. Clean up promptly by sweeping or vacuum. Keep in suitable, closed containers for disposal.

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

Additional advice : Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

SECTION 7: Handling and storage**Handling**

Advice on safe handling : Avoid formation of respirable particles. 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. Dispose of rinse water in accordance with local and national regulations. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient.

Advice on protection against fire and explosion : Avoid dust formation. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Provide appropriate exhaust ventilation at places where dust is formed.

Storage

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. 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
Crystalline Silica	ACGIH	TWA	0.025 mg/m ³	lung cancer, pulm fibrosis, A2, Respirable fraction
	OSHA Z-3	TWA	30mg/m ³ / %SiO ₂ +2	total dust
	OSHA Z-3	TWA	250mppcf / %SiO ₂ +5	a, b, respirable
	OSHA Z-3	TWA	10mg/m ³ / %SiO ₂ +2	e, respirable
	OSHA Z-1-A	TWA	0.1 mg/m ³	Respirable fraction
	OSHA Z-3	TWA	0.1 mg/m ³	Respirable fraction
	OSHA Z-1-A	TWA	0.1 mg/m ³	respirable dust fraction
	ACGIH	TWA	0.025 mg/m ³	lung cancer, pulm fibrosis, A2, Respirable fraction
	OSHA Z-1	TWA	0.05 mg/m³	Respirable fraction

a Based on impinger samples counted by light-field techniques.

A2 Suspected human carcinogen

b The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

e Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics: Aerodynamic diameter (unit density sphere): 2; Percent passing selector: 90 Aerodynamic diameter (unit density sphere): 2.5; Percent passing selector: 75 Aerodynamic diameter (unit density sphere): 3.5; Percent passing selector: 50 Aerodynamic diameter (unit density sphere): 5.0; Percent passing selector: 25 Aerodynamic diameter (unit density sphere): 10; Percent passing selector: 0 The measurements under this note refer to the use of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figure corresponding to that of 2.4 mg/m³ in the table for coal dust is 4.5 mg/m³.

lung cancer Lung cancer
pulm fibrosis Pulmonary fibrosis

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

Hazardous components without workplace control parameters

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Crystalline Silica	14808-60-7	Immediately Dangerous to Life or Health Concentration Value 50 mg/m ³	1995-03-01
		Immediately Dangerous to Life or Health Concentration Value 50 mg/m ³	1995-03-01

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 : 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 : 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: Protective suit. Safety shoes.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

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

Form	: Powder
Physical state	: Solid
Color	: Black
Odor	: No odor
Odor Threshold	: Not applicable

Safety data

Flash point	: Not applicable
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Oxidizing properties	: No
Autoignition temperature	: Not applicable
Molecular formula	: Mixture
Molecular weight	: No data available
pH	: 7 - 10
Pour point	: Not applicable
Boiling point/boiling range	: Not applicable
Vapor pressure	: Not applicable
Relative density	: Not applicable
Density	: 1.54 g/cm ³
Water solubility	: Partly soluble
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: Not applicable
Relative vapor density	: Not applicable
Evaporation rate	: Not applicable

SECTION 10: Stability and reactivity

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

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 : Generation of Dusts.
 Hazardous decomposition products : Carbon oxides
 Sulfur oxides

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

SECTION 11: Toxicological information**Acute oral toxicity**

Acid modified petroleum residuum : LD50: > 5,000 mg/kg

Acute inhalation toxicity

Acid modified petroleum residuum : 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.

Acute dermal toxicity

Acid modified petroleum residuum : No data available

Skin irritation

Acid modified petroleum residuum : No skin irritation

Eye irritation

Acid modified petroleum residuum : No eye irritation

Sensitization

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

Acid modified petroleum residuum : Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Acid modified petroleum residuum : Species: Rat, Male and female
Sex: Male and female
Application Route: Oral
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

Reproductive toxicity

Acid modified petroleum residuum : Species: Rat
Sex: male and female
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

Developmental Toxicity

Acid modified petroleum residuum : 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

CMR effects

Acid modified petroleum residuum : 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.

Crystalline Silica Carcinogenicity: Human carcinogen.

Soltex® Additive
Further information : Chronic Health Hazard.

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

Acid modified petroleum : LC50: > 240 mg/l

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

residuum

Exposure time: 96 h
 Species: Scophthalmus maximus (Flatfish, Flounder)
 semi-static test Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

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

Toxicity to algae

Acid modified petroleum : EC50: 240 mg/l
 residuum : Exposure time: 72 h
 Species: Skeletonema costatum (Marine Algae)
 static test Method: ISO 10253

Elimination information (persistence and degradability)

Biodegradability : This material is not expected to be readily biodegradable.

Ecotoxicology Assessment

Results of PBT assessment
 Acid modified petroleum : Non-classified PBT substance, Non-classified vPvB substance
 residuum
 Additional ecological : This material is not expected to be harmful to aquatic
 information : 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.

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,

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

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

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

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

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

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

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

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

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

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

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

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

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

SECTION 15: Regulatory information**National legislation**

SARA 311/312 Hazards : Chronic Health Hazard
Fire Hazard

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

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

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

Quantity 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 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know : Crystalline Silica - 14808-60-7

New Jersey Right To Know : Crystalline Silica - 14808-60-7

California Prop. 65 Ingredients : WARNING! This product contains a chemical known in the State of California to cause cancer.

Notification status

Europe REACH : On the inventory, or in compliance with the inventory

United States of America TSCA : On the inventory, or in compliance with the inventory

Soltex® Additive

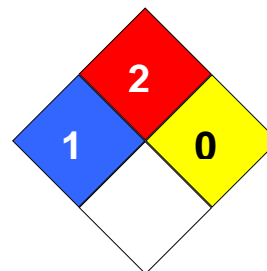
Version 4.0

Revision Date 2016-06-17

Canada DSL	:	On the inventory, or in compliance with the inventory
Australia AICS	:	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	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 1
Fire Hazard: 2
Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 59370

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	PRNT	Presumed Not Toxic

Soltex® Additive

Version 4.0

Revision Date 2016-06-17

	Values		
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%		