

**Soltex® Potassium Additive**

Version 1.3

Revision Date 2017-04-21

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

Product Name : Soltex® Potassium Additive
Material : 1016796

EC-No.Registration number

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
Asphalt, Sulfonated, Potassium Salt	68608-24-2 271-779-4	Chevron Phillips Chemicals International NV 05-2115980570-43-0000
Potassium Lignite	68514-28-3 271-030-1	Chevron Phillips Chemicals International NV 05-2115980574-35-0000

Use : Drilling Mud Additive

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**

Carcinogenicity, Category 1A

H350:

May cause cancer.

Specific target organ systemic toxicity -
repeated exposure, Category 2

H372:

Causes damage to organs through prolonged or
repeated exposure if inhaled.**Label elements****Labeling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H350
H372May cause cancer.
Causes damage to organs through
prolonged or repeated exposure.Precautionary Statements : **Prevention:**
P261
P281Avoid breathing dust.
Use personal protective equipment as
required.

Hazardous ingredients which must be listed on the label:

- 14808-60-7 Crystalline Silica

Additional Labeling:

Restricted to professional users.

SECTION 3: Composition/information on ingredients

Synonyms : Drilling Mud Additive

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Molecular formula : Mixture

Mixtures**Hazardous ingredients**

Chemical name	CAS-No. EC-No. Index No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
Acid modified petroleum residuum	Proprietary		25 - 75
Crystalline Silica	14808-60-7 238-878-4	Carc. 1A; H350 STOT RE 1; H372	0,5 - 1,5

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

- General advice : Move out of dangerous area. 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 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 : Induce vomiting immediately and call a physician. 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 : Avoid dust formation. Avoid generating dust; fine dust

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protection 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.

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.

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SECTION 8: Exposure controls/personal protection**Ingredients with workplace control parameters****SK**

Zložka	Podstata	Hodnota	Kontrolné parametre	Poznámka
Crystalline Silica	SK OEL	TSH	0,1 mg/m3	1A, Merané ako respirabilná frakcia
	SK OEL	NPEL priemerný	0,1 mg/m3	TSH, 4, 3, Tabuľka č. 2, 11, 1, 5, respirabilná frakcia
	SK OEL	NPEL priemerný	0,1 mg/m3	TSH, 4, 3, Tabuľka č. 2, 11, 1, 5, Pevný aerosol, respirabilná frakcia

- 1 Za fibrogénny sa považuje nerozpustný pevný aerosól, vrátane kvapiek aerosólu, ktorý obsahuje viac ako 1 % fibrogénnej zložky a v pokuse na zvierati vykazuje zreteľnú fibrogénnu reakciu pľúcneho tkaniva. Ak je v aerosóle obsiahnutá fibrogénna zložka, musí sa stanoviť vždy jeho respirabilná frakcia a koncentrácia fibrogénnej zložky. V prípade, že aerosól obsahuje menej než 1 % SiO₂ a neobsahuje azbest, považuje sa za aerosól s prevažne nešpecifickým účinkom
- 11 Pre pevné aerosóly, ktoré sú zároveň klasifikované ako karcinogény alebo mutagény kategórie 1A a kategórie 1B, sa stanovujú technické smerné hodnoty (TSH). Definíciu TSH upravuje nariadenie vlády Slovenskej republiky č. 356/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym a mutagénym faktorom pri práci v znení nariadenia vlády Slovenskej republiky č. 301/2007 Z. z. Požiadavky na meranie a hodnotenie azbestu upravuje nariadenie vlády Slovenskej republiky č. 253/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou azbestu pri práci.
- 1A Kategória 1A - Dokázaný karcinogén pre ľudí
- 3 Respirabilná frakcia je váhový podiel častíc pevného aerosólu ≤ 5 µm odobraného vo vzorke ovzdušia v dýchacej zóne zamestnanca. Spôsob a techniku odberu, stanovenie koncentrácie polietavého prachu v respirabilnej a inhalovateľnej frakcii v pracovnom ovzduší podľa prijatej Johannesburgskej konvencie upravuje STN EN 481. Stratégiu merania, výber vhodného postupu a spracovanie výsledkov upravuje STN EN 482 a STN EN 689.
- 4 Fr je obsah fibrogénnej zložky v percentách v respirabilnej frakcii. Fibrogénna zložka - kremeň, kristobalit, tridymit, gama - oxid hlinitý.
- 5 Kremeň, kristobalit, tridymit, gama-oxid hlinitý je 100 % fibrogénnej zložky.
- Tabuľka č. 2 pevné aerosóly s prevažne fibrogénnym účinkom
- TSH Technické Smerné Hodnoty

SI

Sestavine	Osnova	Vrednost	Parametri nadzora	Pripomba
Crystalline Silica	SI OEL	MV	0,15 mg/m3	A, Y, Alveolarna frakcija

- A Alveolarna frakcija - del vdihnjene suspendirane snovi, ki doseže alveole
- Y Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in BAT vrednosti.

SE

Beståndsdelar	Grundval	Värde	Kontrollparametrar	Anmärkning
Crystalline Silica	SE AFS	NGV	0,1 mg/m3	2, C, M, Respirabelt
	SE AFS	NGV	0,1 mg/m3	2, C, M, (respirabelt damm)

- 2 Med inhalerbart damm menas den dammfraction som definieras i svensk standard SS-EN 481, Arbetsplatsluft - Partikelstorleksfraktioner för mätning av luftburna partiklar, Utgåva 1, 1993, punkt 2.3 och som har en provtagningskaraktäristik enligt punkt 5.1. Med respirabelt damm menas den dammfraction som definieras i svensk standard SS-EN 481, Arbetsplatsluft - Partikelstorleksfraktioner för mätning av luftburna partiklar, Utgåva 1, 1993, punkt 2.11 och som har en provtagningskaraktäristik enligt punkt 5.3. Med totaldamm menas de partiklar (aerosoler) som fastnar på ett filter i den provtagare som beskrivs i Metodserien, Provtagning av totaldamm och respirabelt damm, Metod nr 1010, Arbetarskyddsstyrelsen, numera Arbetssmiljöverket. Filterdiameteren är normalt 37 mm, men kan även vara 25 mm. Trots sitt namn provtas inte den totala mängden luftburna partiklar med denna metod.
- C Ämnet är cancerframkallande.
- M Medicinska kontroller kan krävas för hantering av ämnet. Se vidare föreskrifterna om medicinska kontroller i arbetslivet. För vissa ämnen ska arbetsgivaren erbjuda läkarundersökning och för andra ämnen gäller krav på periodisk läkarundersökning och tjänstbarhetsbedömning. Se föreskrifterna om kemiska arbetsmiljörisker.

PT

Componentes	Bases	Valor	Parâmetros de controlo	Nota
Crystalline Silica	PT OEL	VLE-MP	0,025 mg/m3	A2, Fração respirável

A2 Agente carcinogénico suspeito no Homem.

PL

Składniki	Podstawa	Wartość	Parametry dotyczące kontroli	Uwaga
Crystalline Silica	PL NDS	NDS	1 mg/m3	Frakcja respirabilna, frakcja respirabilna
	PL NDS	NDS	0,3 mg/m3	Frakcja respirabilna, frakcja respirabilna
	PL NDS	NDS	4 mg/m3	frakcja wdychalna, (frakcja wdychana)
	PL NDS	NDS	2 mg/m3	frakcja wdychalna, (frakcja wdychana)

Frakcja respirabilna - frakcja aerosolu wnikażąca do dróg oddechowych, która stwarza zagrożenie dla zdrowia po zdeponowaniu w obszarze wymiany gazowej.

Frakcja wdychalna - frakcja aerosolu wnikażąca przez nos i usta, która po zdeponowaniu w drogach oddechowych stwarza zagrożenie dla zdrowia.

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NO

Komponenter	Grunnlag	Verdi	Kontrollparametrer	Nota
Crystalline Silica	FOR-2011-12-06-1358	TWA	0,1 mg/m3	7, K, respirabelt støv
	FOR-2011-12-06-1358	TWA	0,3 mg/m3	7, K, totalstøv

7 Støv som inneholder α-kvarts, kristobalitt og/eller tridymitt vurderes ut fra summasjonsformel. Samtidig må verdiene for sjenerende støv overholdes.

K Stoffer som skal betraktes som kreftfremkallende

NL

Bestanddelen	Basis	Waarde	Controleparameters	Opmerking
Crystalline Silica	NL WG	TGG-8 uur	0,075vezels per cm3	B1, Respirabel
	NL WG	TGG-8 uur	0,075vezels per cm3	B1, (respirabel stof)

B1 Kankerverwekkende stoffen, vastgesteld op basis van het drempelwaarde-effect

LV

Sastāvdaļas	Bāze	Vērtība	Pārvaldības parametri	Piezīme
Potassium Sulfate	LV OEL	AER 8 st	10 mg/m3	

LT

Komponentai	Pagrindas, bazė	Vertė	Kontrolės parametrai	Pastaba
Potassium Sulfate	LT OEL	IPRD	10 mg/m3	
Crystalline Silica	LT OEL	IPRD	0,1 mg/m3	Alveolinė

HU

Komponensek	Bázis	Érték	Ellenőrzési paraméterek	Megjegyzés
Crystalline Silica	HU OEL	AK-érték	0,15 mg/m3	respirábilis por
	HU OEL	AK-érték	0,15 mg/m3	respirábilis por

GB

Ingredients	Basis	Value	Control parameters	Note
Crystalline Silica	GB EH40	TWA	0,1 mg/m3	15, 44, 45, 46, 47, 2, Respirable
	GB EH40	TWA	0,1 mg/m3	15, 44, 45, 46, 47, 2, (respirable dust)

15 For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

2 Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used

44 The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit.

45 Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'.

46 Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3.

47 Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with.

FR

Composants	Base	Valeur	Paramètres de contrôle	Note
Crystalline Silica	FR VLE	VME	0,1 mg/m3	noir, Fraction de poussière alvéolaire

noir Valeurs limites réglementaires contraignantes

FI

Aineosat	Peruste	Arvo	Valvontaa koskevat muuttujat	Huomautus
Crystalline Silica	FI OEL	HTP-arvot 8h	0,2 mg/m3	-, alveolijae
	FI OEL	HTP-arvot 8h	0,05 mg/m3	alveolijae

- Valtioneuvoston päätös räjäytys- ja louhintatyön järjestysohjeista [410/1986]

ES

Componentes	Base	Valor	Parámetros de control	Nota
Crystalline Silica	ES VLA	VLA-ED	0,05 mg/m3	d, n, y, fracción respirable

d Véase UNE EN 481: Atmósferas en los puestos de trabajo. Definición de las fracciones por el tamaño de las partículas para la medición de aerosoles.

n En las industrias extractivas véase la Orden ITC 2585/2007, de 30 de agosto (BOE nº 315 de 7 de septiembre de 2007), por la que se aprueba la Instrucción Técnica Complementaria 2.0.02 del Reglamento General de Normas Básicas de Seguridad Minera.

y Reclasificado, por la International Agency for Research on Cancer (IARC) de grupo 2A (probablemente carcinogénico en humanos) a grupo 1 (carcinogénico en humanos).

EE

Komponendid, osad	Alused	Väärtus	Kontrolliparameetrid	Märkused
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Crystalline Silica	EE OEL	Piirnorm	0,1 mg/m3	1, Peentolm
	EE OEL	Piirnorm	0,1 mg/m3	1, Peentolm

1 Peentolm koosneb alla 2,5-mikromeetrise läbimõõduga osakestest, mis võivad jõuda koos sissehingatava õhuga kopsu alveoolidesse

DK

Komponenter	Basis	Værdi	Kontrolparametre	Note
Crystalline Silica	DK OEL	GV	0,1 mg/m3	K, (respirabelt støv)
	DK OEL	GV	0,3 mg/m3	Totalt støv

K Betyder, at stoffet er optaget på listen over stoffer, der anses for at være kræftfremkaldende.

CZ

Složky	Základ	Hodnota	Kontrolní parametry	Poznámka
Crystalline Silica	CZ OEL	PEL	0,1 mg/m3	Fr, vlákno, respirabilní frakce

Fr Fr = obsah fibrogenní složky v respirabilní frakci v procentech

CH

Inhaltsstoffe	Grundlage	Wert	Zu überwachende Parameter	Bemerkung
Crystalline Silica	CH SUVA	MAK-Wert	0,15 mg/m3	P, Carc.Cat.1, NIOSH, OSHA, HSE, SSc, alveolengängiger Staub

Carc.Cat.1 Krebserzeugende Stoffe Kategorie 1

HSE Health and Safety Executive (Occupational Medicine and Hygiene Laboratory)

NIOSH National Institute for Occupational Safety and Health

OSHA Occupational Safety and Health Administration

P Provisorische Festlegung - Die MAK-Werte für diese Substanzen sind aus verschiedenen Gründen noch nicht definitiv festgelegt.

SSc Eine Schädigung der Leibesfrucht braucht bei Einhaltung des MAK-Wertes nicht befürchtet zu werden.

BE

Bestanddelen	Basis	Waarde	Controleparameters	Opmerking
Crystalline Silica	BE OEL	TGG 8 hr	0,1 mg/m3	inadembedbaar
	BE OEL	TGG 8 hr	0,1 mg/m3	(respirabel stof)

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.

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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.

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	: No data available

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
Thermal decomposition	: No data available
Molecular formula	: Mixture
Molecular weight	: No data available
pH	: Not applicable
Pour point	: Not applicable
Boiling point/boiling range	: Not applicable
Vapor pressure	: Not applicable
Relative density	: Not applicable
Density	: 1,59 g/cm ³
Water solubility	: Partly soluble
Partition coefficient: n-octanol/water	: No data available

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Viscosity, kinematic : Not applicable

Relative vapor density : Not applicable

Evaporation rate : 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 : Generation of Dusts.

Thermal decomposition : No data available

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
Information given is based on data obtained from similar substances.

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.

Information given is based on data obtained from similar substances.

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Acute dermal toxicity

Acid modified petroleum
residuum : No data available

Skin irritation

Acid modified petroleum
residuum : No skin irritation
Information given is based on data obtained from similar
substances.

Eye irritation

Acid modified petroleum
residuum : No eye irritation
Information given is based on data obtained from similar
substances.

Sensitization

Acid modified petroleum
residuum : Did not cause sensitization on laboratory animals.
Information given is based on data obtained from similar
substances.

Repeated dose toxicity

Acid modified petroleum
residuum : 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
Information given is based on data obtained from similar
substances.

Reproductive toxicity

Acid modified petroleum
residuum : Species: Rat
Sex: male and female
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
Information given is based on data obtained from similar
substances.

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

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CMR effects

Crystalline Silica : Carcinogenicity: Human carcinogen.

Soltex® Potassium Additive**Further information** : No data available.**SECTION 12: Ecological information****Toxicity to fish**

Acid modified petroleum residuum : LC50: > 240 mg/l
Exposure time: 96 h
Species: Scophthalmus maximus (Flatfish, Flounder)
static test Method: OECD Test Guideline 203
Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates

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

Toxicity to algae

Acid modified petroleum residuum : EC50: 240 mg/l
Exposure time: 72 h
Species: Skeletonema costatum (Marine Algae)
static test Method: ISO 10253
Information given is based on data obtained from similar substances.

Elimination information (persistence and degradability)

Biodegradability : This material is not expected to be 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.

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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, 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

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SECTION 15: Regulatory information**National legislation**

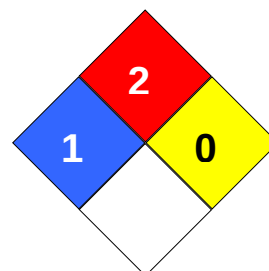
Major Accident Hazard Legislation : 96/82/EC Update: 2003
 Directive 96/82/EC does not apply

Notification status

Europe REACH : On the inventory, or in compliance with the inventory
 United States of America (USA) TSCA : On the inventory, or in compliance with the inventory
 Canada DSL : This product contains one or several components listed in the Canadian NDSL.
 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 : Not 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 : 59360

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	NIOSH	National Institute for Occupational

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	Substances List		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%		

Full text of H-Statements referred to under sections 2 and 3.

H350 May cause cancer.
H372 Causes damage to organs through prolonged or repeated exposure if inhaled.