



Chrome Free Desco® Deflocculant

Version 1.10

Revision Date 2019-08-21

According to Regulation (EC) No. 1907/2006, Regulation (EC) No. 2015/830

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

1.1

Product information

Product Name : Chrome Free Desco® Deflocculant
Material : 1016808

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Details of the supplier of the safety data sheet

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

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Emergency telephone:

Health:

866.442.9628 (North America)
1.832.813.4984 (International)

Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)
Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
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
Argentina: +(54)-1159839431

Responsible Department : Product Safety and Toxicology Group
E-mail address : SDS@CPChem.com

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Website : www.CPChem.com

SECTION 2: Hazards identification**2.1****Classification of the substance or mixture
REGULATION (EC) No 1272/2008**

Carcinogenicity, Category 1A

H350i:

May cause cancer by inhalation.

Long-term (chronic) aquatic hazard,
Category 3

H412:

Harmful to aquatic life with long lasting effects.

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

Hazard pictograms :



Signal Word : Danger

Hazard Statements :

H350i
H412May cause cancer by inhalation.
Harmful to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:P201
P202Obtain special instructions before use.
Do not handle until all safety precautions
have been read and understood.P273
P280Avoid release to the environment.
Wear protective gloves/ protective clothing/
eye protection/ face protection.**Response:**

P308 + P313

IF exposed or concerned: Get medical
advice/ attention.**Storage:**

P405

Store locked up.

Disposal:

P501

Dispose of contents/ container to an
approved waste disposal plant.

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**3.1 - 3.2****Substance or Mixture**

Synonyms : Drilling Mud Deflocculant

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Molecular formula : Mixture

Hazardous ingredients

Chemical name	CAS-No. EC-No. Index No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
Sulfomethylated Quebracho	68201-64-9 269-229-3	Aquatic Chronic 3; H412	60 - 80
Ferrous Sulfate	17375-41-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Irrit. 2; H315	5 - 9
Crystalline Silica	14808-60-7 238-878-4	Carc. 1A; H350i STOT RE 1; H372	0,1 - 1

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

SECTION 4: First aid measures**4.1****Description of 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 : 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 : No data available

5.1**Extinguishing media**

- Unsuitable extinguishing media : High volume water jet.

5.2**Special hazards arising from the substance or mixture**

- 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

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floors and ledges.

5.3**Advice for firefighters**

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 : Iron Oxides. Sulfur oxides.

SECTION 6: Accidental release measures**6.1****Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment. Avoid dust formation. Avoid breathing dust.

6.2**Environmental precautions**

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.

6.3**Methods and materials for containment and cleaning up**

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).

6.4**Reference to other sections**

Reference to other sections : For personal protection see section 8. For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1****Precautions for safe handling
Handling**

Advice on safe handling : Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid exposure - obtain special instructions

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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.

7.2**Conditions for safe storage, including any incompatibilities****Storage**

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection**8.1****Control parameters
Ingredients with workplace control parameters****SK**

Zložky	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 mutagénnym 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 Johanenburgskej 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

Beständsdelar	Grundval	Värde	Kontrollparametrar	Anmärkning
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SDS Number:100000013725

5/17

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Crystalline Silica	SE AFS	NGV	0,1 mg/m3	3, C, M, Respirabelt
	SE AFS	NGV	0,1 mg/m3	3, C, M, (respirabelt damm)

- 3 Med inhalerbar fraktion 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 respirabel fraktion 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, Arbetsarkivstyrelsen, numera Arbetsmiljöverket. Filterdiametern 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 arbetsmiljörisiker och föreskrifterna om kvarts - stendamm i arbetsmiljön.

RO

Componente	Sursă	Valoare	Parametri de control	Notă
Crystalline Silica	RO OEL	TWA	0,1 mg/m3	fracție respirabilă

PT

Componentes	Bases	Valor	Parâmetros de controlo	Nota
Ferrous Sulfate	PT OEL	VLE-MP	1 mg/m3	irritação do TRS,
Crystalline Silica	PT OEL	VLE-MP	0,025 mg/m3	A2, Fração respirável

- A2 Agente carcinogénico suspeito no Homem.
irritação do trato respiratório superior
TRS

PL

Składniki	Podstawa	Wartość	Parametry dotyczące kontroli	Uwaga
Crystalline Silica	PL NDS	NDS	1 mg/m3	6, frakcja respirabilna
	PL NDS	NDS	0,3 mg/m3	6, frakcja respirabilna
	PL NDS	NDS	4 mg/m3	4, frakcja wdychana
	PL NDS	NDS	2 mg/m3	4, frakcja wdychana

- 4 Frakcja wdychalna - frakcja aerozolu wnikażąca przez nos i usta, która po zdeponowaniu w drogach oddechowych stwarza zagrożenie dla zdrowia, określona zgodnie z normą PN-EN 481.
- 6 Frakcja respirabilna - frakcja aerozolu wnikażąca do dróg oddechowych, która stwarza zagrożenie dla zdrowia po zdeponowaniu w obszarze wymiany gazowej, określona zgodnie z normą PN-EN 481.

NO

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

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

MK

Съставки	Основа	Стойност	Параметри на контрол	Бележка
Crystalline Silica	MK OEL	MV	0,15 mg/m3	Y, A, Alveolar fraction

- A Alveolar fraction - the part of the inhaled suspended material that reaches the alveoli
Y Substances without teratogenic effects when respecting limit values and bat values.

LT

Komponentai	Šaltinis	Vertė	Kontrolės parametrai	Pastaba
Crystalline Silica	LT OEL	IPRD	0,1 mg/m3	alveolinė frakcija

IS

Komponenter	Grunnlag	Verdi	Kontrollparametrer	Nota
Ferrous Sulfate	IS OEL	TWA	1 mg/m3	
Crystalline Silica	IS OEL	TWA	0,3 mg/m3	Total
	IS OEL	TWA	0,1 mg/m3	Respirable
	IS OEL	TWA	0,1 mg/m3	(støv som kan innåndes)
	IS OEL	TWA	0,3 mg/m3	Totalt støv

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IE

Components	Basis	Value	Control parameters	Note
Ferrous Sulfate	IE OEL	OELV - 8 hrs (TWA)	1 mg/m ³	
	IE OEL	OELV - 15 min (STEL)	2 mg/m ³	
Crystalline Silica	IE OEL	OELV - 8 hrs (TWA)	0,1 mg/m ³	respirable
	IE OEL	OELV - 8 hrs (TWA)	0,1 mg/m ³	(respirable dust)

HU

Komponensek	Bázis	Érték	Ellenőrzési paraméterek	Megjegyzés
Crystalline Silica	HU OEL	AK-érték	0,15 mg/m ³	respirábilis frakció
	HU OEL	AK-érték	0,15 mg/m ³	respirábilis frakció

HR

Sastojci	Temelj	Vrijednost	Nadzorni parametri	Bilješka
Ferrous Sulfate	HR OEL	GVI	1 mg/m ³	
	HR OEL	KGVI	2 mg/m ³	
Crystalline Silica	HR OEL	GVI	0,1 mg/m ³	

GR

Συστατικά	Βάση	Τιμή	Παράμετροι ελέγχου	Σημείωση
Ferrous Sulfate	GR OEL	TWA	1 mg/m ³	
	GR OEL	STEL	2 mg/m ³	

GB

Components	Basis	Value	Control parameters	Note
Ferrous Sulfate	GB EH40	TWA	1 mg/m ³	
	GB EH40	STEL	2 mg/m ³	
Crystalline Silica	GB EH40	TWA	0,1 mg/m ³	15, 44, 45, 46, 47, 16, Respirable
	GB EH40	TWA	0,1 mg/m ³	15, 44, 45, 46, 47, 16, (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 MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols
- 16 Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit 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 to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits.
- 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 MDHS14/4.
- 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/m ³	noir, Fraction de poussière alvéolaire

noir Valeurs limites réglementaires contraignantes

FI

Aineosat	Peruste	Arvo	Valvontaa koskevat muuttujat	Huomautus
Ferrous Sulfate	FI OEL	HTP-arvot 8h	1 mg/m ³	
Crystalline Silica	FI OEL	HTP-arvot 8h	0,2 mg/m ³	-, alveolijae
	FI OEL	HTP-arvot 8h	0,05 mg/m ³	alveolijae

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

ES

Componentes	Base	Valor	Parámetros de control	Nota
Ferrous Sulfate	ES VLA	VLA-ED	1 mg/m ³	c,
Crystalline Silica	ES VLA	VLA-ED	0,05 mg/m ³	d, n, y, fracción respirable

c Los términos 'soluble' e 'insoluble' se entienden con referencia al agua.

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 ORDEN ITC/2585/2007, de 30 de agosto, por la que se aprueba la Instrucción técnica complementaria 2.0.02 «Protección de los trabajadores contra el polvo, en relación con la silicosis, en las industrias extractivas», 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/m ³	1, Peentolm
	EE OEL	Piirnorm	0,1 mg/m ³	1, Peentolm

1 Peentolm koosneb alla 2,5-mikromeetrise läbimõõduga osakestest, mis võivad jõuda koos sissehingatava õhuga kopsu alveoolidesse (respireeritav fraktsioon).

DK

Komponenter	Basis	Værdi	Kontrolparametre	Note
Ferrous Sulfate	DK OEL	GV	1 mg/m ³	
Crystalline Silica	DK OEL	GV	0,1 mg/m ³	K, (respirabelt støv)
	DK OEL	GV	0,3 mg/m ³	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/m ³	Fr, vláknó, respirabilní frakce

Fr Fr = obsah fibrogenní složky v respirabilní frakci v procentech

CY

Συστατικά	Βάση	Τιμή	Παράμετροι ελέγχου	Σημείωση
Crystalline Silica	CY OEL 2	M.E.Σ.	10mg/m ³ / % respirable quartz	

CH

Inhaltsstoffe	Grundlage	Wert	Zu überwachende Parameter	Bemerkung
Ferrous Sulfate	CH SUVA	MAK-Wert	1 mg/m ³	OSHA, einatembarer Staub
Crystalline Silica	CH SUVA	MAK-Wert	0,15 mg/m ³	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.

BG

Съставки	Основа	Стойност	Параметри на контрол	Бележка
Ferrous Sulfate	BG OEL	TWA	1 mg/m ³	
Crystalline Silica	BG OEL	TWA	0,07 mg/m ³	Респирабилна

BE

Bestanddelen	Basis	Waarde	Controleparameters	Opmerking
Ferrous Sulfate	BE OEL	TGG 8 hr	1 mg/m ³	
Crystalline Silica	BE OEL	TGG 8 hr	0,1 mg/m ³	inadembare fractie
	BE OEL	TGG 8 hr	0,1 mg/m ³	(respirabel stof)

AT

Inhaltsstoffe	Grundlage	Wert	Zu überwachende Parameter	Bemerkung
Crystalline Silica	AT OEL	MAK-TMW	0,15 mg/m ³	Alveolengängige Staubfraktion

8.2

Exposure controls 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

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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.

SECTION 9: Physical and chemical properties**9.1****Information on basic physical and chemical properties****Appearance**

- Form : Powder
- Physical state : Solid
- Color : Fine reddish-brown with small white specks
- Odor : Odorless
- Odor Threshold : Not applicable

Safety data

- Flash point : Not applicable
- Lower explosion limit : Not applicable
- Upper explosion limit : Not applicable
- Oxidizing properties : No
- Autoignition temperature : No data available
- Thermal decomposition : No data available
- Molecular formula : Mixture

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Molecular weight	: Not applicable
pH	: Not applicable
Pour point	: No data available
Boiling point/boiling range	: Not applicable
Vapor pressure	: Not applicable
Relative density	: Not applicable
Density	: 1,60 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**10.2**

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

10.3**Possibility of hazardous reactions**

Hazardous reactions : Hazardous reactions: Hazardous polymerization does not occur.
Further information: No decomposition if stored and applied as directed.

10.4

Conditions to avoid : Generation of Dusts.

10.5

Materials to avoid : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Thermal decomposition : No data available

10.6

Hazardous decomposition products : Iron Oxides
Sulfur oxides

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

SECTION 11: Toxicological information**11.1****Information on toxicological effects****Chrome Free Desco® Deflocculant**

Acute oral toxicity : Acute toxicity estimate: 3.544 mg/kg
Method: Calculation method

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Acute dermal toxicity : LD50: unknown

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Skin irritation : May irritate skin.

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Eye irritation : May irritate eyes.

Repeated dose toxicity

Sulfomethylated Quebracho : Species: Rat, male
Sex: male
Application Route: oral gavage
Dose: 100, 300, 1000 mg/kg
Exposure time: 32 d
Number of exposures: Daily
NOEL: 1.000 mg/kg
Method: OECD Guideline 422
No adverse effects expected

Species: Rat, female
Sex: female
Application Route: oral gavage
Dose: 100, 300, 1000 mg/kg
Exposure time: 39 - 47 d
Number of exposures: Daily
NOEL: 1.000 mg/kg
Method: OECD Guideline 422
No adverse effects expected

Genotoxicity in vitro

Sulfomethylated Quebracho : Test Type: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Method: OECD Guideline 473
Result: negative

Reproductive toxicity

Sulfomethylated Quebracho : Species: Rat
Sex: male
Application Route: oral gavage
Dose: 100, 300, 1000 mg/kg
Exposure time: 32 d
Number of exposures: Daily

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Method: OECD Guideline 422
 NOAEL Parent: 1.000 mg/kg
 Fertility and developmental toxicity tests did not reveal any effect on reproduction.

Species: Rat
 Sex: female
 Application Route: oral gavage
 Dose: 100, 300, 1000 mg/kg
 Exposure time: 39 - 47 d
 Number of exposures: Daily
 Method: OECD Guideline 422
 NOAEL Parent: 1.000 mg/kg
 NOAEL F1: 1.000 mg/kg
 Fertility and developmental toxicity tests did not reveal any effect on reproduction.

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Aspiration toxicity : No aspiration toxicity classification.

CMR effects

Crystalline Silica : Carcinogenicity: Positive evidence from human epidemiological studies (inhalation)

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Further information : No data available.

SECTION 12: Ecological information**12.1****Toxicity****Ecotoxicity effects****Toxicity to fish**

Sulfomethylated Quebracho : LL50: > 1.800 mg/l
 Exposure time: 96 h
 Species: Scophthalmus maximus (Flatfish, Flounder)
 Method: OECD Test Guideline 203

Ferrous Sulfate : LL50: > 6,25 mg/l
 Exposure time: 96 h
 Species: Cyprinodon variegatus (sheepshead minnow)
 semi-static test Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

Sulfomethylated Quebracho : EL50: 73,2 mg/l
 Exposure time: 48 h
 Species: Acartia tonsa (Marine Copepod)
 Method: ISO TC147/SC5/WG2

Ferrous Sulfate : LC50: 190 mg/l
 Exposure time: 48 h
 Species: Acartia tonsa (Marine Copepod)

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Method: ISO TC147/SC5/WG2

Toxicity to algae

Sulfomethylated Quebracho : ErC50: > 100 mg/l
 Exposure time: 72 h
 Species: Desmodesmus subspicatus (green algae)
 Method: OECD Test Guideline 201

EbC50: 79 mg/l
 Exposure time: 72 h
 Species: Desmodesmus subspicatus (green algae)
 Method: OECD Test Guideline 201

Ferrous Sulfate EL50: 45 mg/l
 Exposure time: 72 h
 Species: Skeletonema costatum (Marine Algae)
 Method: ISO 10253

12.2**Persistence and degradability**

Biodegradability : Not applicable

12.3**Bioaccumulative potential**

Elimination information (persistence and degradability)

Bioaccumulation : This material is not expected to bioaccumulate.

12.4**Mobility in soil**

Mobility : No data available

12.5**Results of PBT and vPvB assessment**

Results of PBT assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6**Other adverse effects**

Additional ecological information : Harmful to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

Sulfomethylated Quebracho : Harmful to aquatic life.

Long-term (chronic) aquatic hazard

Sulfomethylated Quebracho : Harmful to aquatic life with long lasting effects.

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SECTION 13: Disposal considerations**13.1****Waste treatment methods**

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**14.1 - 14.7****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)

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (FERROUS SULFATE), 9, III, RQ (FERROUS SULFATE)

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.

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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**15.1**

Safety, health and environmental regulations/legislation specific for the substance or mixture
National legislation

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Water contaminating class (Germany) : WGK 2 water endangering

15.2

Major Accident Hazard Legislation : 96/82/EC Update:
 Not applicable

Notification status

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

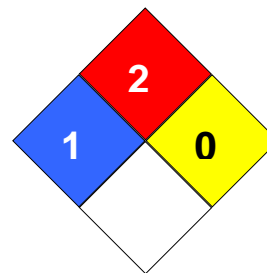
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SECTION 16: Other information

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

**Further information**

Legacy SDS Number : 59420

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%		

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H350i	May cause cancer by inhalation.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H412	Harmful to aquatic life with long lasting effects.