

MATERIAL SAFETY DATA SHEET



Chrome Free Desco® Deflocculant

Version 1.3

Revision Date 2012-01-16

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : Chrome Free Desco® Deflocculant
 Material : 1016808, 1017884

EC-No.Registration number

Chemical Name	CAS-No. Index-No.	Legal Entity Registration number
Sulfomethylated tannin	68201-64-9	Chevron Phillips Chemicals International NV Pre-Registered
Sodium Lignite	68131-04-4	Chevron Phillips Chemicals International NV Pre-Registered
Iron sulfate	7720-78-7 026-003-00-7	Chevron Phillips Chemicals International NV Pre-Registered

Company : Drilling Specialties Company
 10001 Six Pines Drive
 The Woodlands, TX 77380

Local : Chevron Phillips Chemicals International N.V.
 Brusselsesteenweg 355
 B-3090 Overijse
 Belgium

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

Emergency telephone:

Health:
 866.442.9628 (North America)
 1.832.813.4984 (International)

Transport:
 North America: CHEMTREC 800.424.9300 or 703.527.3887
 Asia: +800 CHEMCALL (+800 2436 2255) China: 0532.8388.9090

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EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Chemcare Asia: Tel: +65 6848 9048 - Mob: +65 8382 9188 - Fax: +65 6848
 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 : MSDS@CPChem.com
 Website : www.CPChem.com

2. HAZARDS IDENTIFICATION**Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Carcinogenicity , Category 1A H350:
 May cause cancer.
 Chronic aquatic toxicity , Category 3 H412:
 Harmful to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

Dangerous for the environment R52:
 Harmful to aquatic organisms.

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

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H350i May cause cancer by inhalation.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
 P273 Avoid release to the environment.
 P281 Use personal protective equipment as required.
Response:
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Storage:
 P405 Store locked up.

Hazardous ingredients which must be listed on the label:

- 14808-60-7 Crystalline Silica

Additional Labeling:

Restricted to professional users.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Drilling Mud Deflocculant

Molecular formula : Mixture

Mixtures**Hazardous ingredients**

Chemical Name	CAS-No. EINECS-No.	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
Sulfomethylated tannin	68201-64-9 269-229-3	R52	Aquatic Chronic 3; H412	60 - 80
Ferrous Sulfate	17375-41-6	Xi; R36/38 Xn; R22	Eye Irrit. 2; H319 Acute Tox. 4; H302 Skin Irrit. 2; H315	7 - 15
Crystalline Silica	14808-60-7 238-878-4		Carc. 1A; H350 STOT RE 1; H372	0,1 - 1

EC-No.Registration number

Chemical Name	CAS-No. EINECS-No.	Registration number
Sulfomethylated tannin	68201-64-9 269-229-3	Chevron Phillips Chemicals International NV Pre-Registered
Sodium Lignite	68131-04-4 268-608-0	Chevron Phillips Chemicals International NV Pre-Registered
Iron sulfate	7720-78-7 231-753-5	Chevron Phillips Chemicals International NV Pre-Registered

For the full text of the R-phrases mentioned in this Section, see Section 16.

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

4. FIRST AID MEASURES

- General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.
- If inhaled : Move to fresh air. If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

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If swallowed : Keep respiratory tract clear. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flash point : Not applicable

Autoignition temperature : No data available

Unsuitable extinguishing media : High volume water jet.

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters : Wear self contained breathing apparatus for fire fighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Fire and explosion protection : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.

Hazardous decomposition products : Iron Oxides. Sulfur oxides.

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 : Keep in suitable, closed containers for disposal.

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.

Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.

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Storage

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**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. Dust safety masks are recommended when the dust concentration is more than 10 mg/m³.

Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties****Appearance**

Form : Powder
Physical state : Solid
Color : Fine reddish-brown with small white specks

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Odor	: Odorless
Safety data	
Flash point	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Oxidizing properties	: no
Autoignition temperature	: No data available
Molecular formula	: Mixture
Molecular Weight	: No data available
pH	: Not applicable
Pour point	: No data available
Boiling point/boiling range	: Not applicable
Vapor pressure	: Not applicable
Relative density	: 1,5
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

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.

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

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

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11. TOXICOLOGICAL INFORMATION**Chrome Free Desco® Deflocculant**

Acute oral toxicity : Acute toxicity estimate: 3.500 mg/kg
Method: Calculation method

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Acute inhalation toxicity : LC50: not known

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Acute dermal toxicity : LD50: unknown

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Skin irritation : May cause skin irritation.

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Eye irritation : May cause eye irritation.

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Aspiration toxicity : No aspiration toxicity classification.

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Further information : No data available.

12. ECOLOGICAL INFORMATION**Toxicity to fish**

Sulfomethylated tannin : LC50: > 1.800 mg/l
Exposure time: 96 h
Species: *Scophthalmus maximus* (Flatfish, Flounder)

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

Toxicity to daphnia and other aquatic invertebrates.

Sulfomethylated tannin : EC50: 73,2 mg/l
Exposure time: 48 h
Species: *Acartia tonsa* (Marine Copepod)

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

Toxicity to algae

Sulfomethylated tannin : EL50: 79 mg/l
Exposure time: 72 h
Species: *Desmodesmus subspicatus* (green algae)

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

Elimination information (persistence and degradability)

Biodegradability : Not applicable

Additional ecological : An environmental hazard cannot be excluded in the event of
 information unprofessional handling or disposal.
 Harmful to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

The information in this MSDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : The product should not be allowed to enter drains, water
 courses or the soil. Do not contaminate ponds, waterways or
 ditches with chemical or used container. Send to a licensed
 waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product.
 Do not re-use empty containers.

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 MSDS 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
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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

15. REGULATORY INFORMATION**National legislation**

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

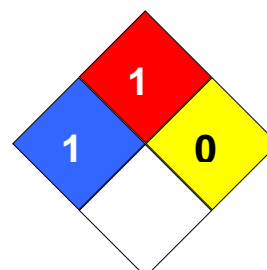
Water contaminating class (Germany) : WGK 2 water endangering

Notification status

Europe REACH : On the inventory, or in compliance with the inventory
 United States of America US.TSCA : On the inventory, or in compliance with the inventory
 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 : Not 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

16. OTHER INFORMATION

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



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Further information

Legacy MSDS Number : 59420

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this MSDS pertains only to the product as shipped.

The information provided in this Material 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 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 R-phrases referred to under sections 2 and 3

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R22	Harmful if swallowed.
R36/38	Irritating to eyes and skin.
R52	Harmful to aquatic organisms.

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.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H412	Harmful to aquatic life with long lasting effects.