

Version 1.2 Revision Date 2025-01-03

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

**Product information** 

Product Name : Chrome Free Desco® Deflocculant

Material : 1016808

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: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090

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

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)

Belgium: 070 245 245 (24 hours/day, 7 days/week)

Bulgaria: +359 2 9154 233

Croatia: +3851 2348 342 (24 hours/day, 7 days/week)

Cyprus: 1401

Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402

Denmark: Danish Poison Center (Giftlinjen): +45 8212 1212 Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Finland: 0800 147 111 09 471 977 (24 hours/day)

France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)

Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Greece: (0030) 2107793777 (24 hours/day, 7 days/week) Hungary: +36-80-201-199 (24 hours/day, 7 days/week)

Iceland: 543 2222 (24 hours/day, 7 days/week)

Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

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Italy: POISON CENTER MILAN – Azienda Ospedaliera Niguarda Ca` Grande Tel. +39 02 66101029; POISON CENTER ROME – Policlinico "Agostino Gemelli", Servizio di tossicologia clinica Tel. +39 06 3054343; POISON CENTER ROME – Ospedale Pediatrico Bambino Gesù Tel. +39 06 68593726; POISON CENTER ROME – Policlinico "Umberto I" Tel. +39 06 4997 8000; POISON CENTER FOGGIA – Azienda Ospedaliera Universitaria Riuniti Tel. +39 0881 732326; POISON CENTER NAPLES – Azienda Ospedaliera "Antonio Cardarelli" Tel. +39 081 7472870; POISON CENTER FLORENCE – Azienda Ospedaliera universitaria Careggi Tel. +39 055 7947819; POISON CENTER PAVIA – IRCCS Fondazione Salvatore Maugeri Tel. +39 0382 24444; POISON CENTER BERGAMO – Azienda Ospedaliera "Papa Giovanni XXIII" Tel. 800 883 300; POISON CENTER VERONA – Azienda Ospedaliera Universitaria integrata Tel. 800 011 858:

Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371 67042473. (24 hours.)

Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Lithuania: +370 (85) 2362052

Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)

Malta: +356 2395 2000

The Netherlands: NVIC: +31 (0)88 755 8000 Norway: 22 59 13 00 (24 hours/day, 7 days/week)

Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Portugal: CIAV phone number: +351 800 250 250

Romania: +40213183606 Slovakia: +421 2 5477 4166 Slovenia: Phone number: 112

Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24

hours/day, 7 days/week)

Sweden: 112 – ask for Poisons Information

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 GHS Classification and labelling according to JIS Z 7252-2019 and JIS Z 7253-2019 (GHS 2015)

#### Classification

: Carcinogenicity, Category 1A

Short-term (acute) aquatic hazard, Category 3 Long-term (chronic) aquatic hazard, Category 3

#### Labeling

Symbol(s) :



Signal Word : Danger

Hazard Statements : H350: May cause cancer.

H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements : Prevention:

P201: Obtain special instructions before use.

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P202: Do not handle until all safety precautions have been

read and understood.

P273: Avoid release to the environment.

P280: 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.

## **SECTION 3: Composition/information on ingredients**

Synonyms : Drilling Mud Deflocculant

Molecular formula : Mixture

Chemical name	CAS-No.	Concentration	ENCS/ISHL number
Sulfomethylated Quebracho	68201-64-9	60 % - 80%	
Ferrous Sulfate	17375-41-6	5 % - 9%	
Crystalline Silica	14808-60-7	0.1 % - 1%	1-548

## **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 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 : 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.

#### Notes to physician

Symptoms : No data available.

Risks : No data available.

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Treatment : No data available.

## **SECTION 5: Firefighting measures**

Flash point : Not applicable

Autoignition temperature : No data available

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

: Iron 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 : Avoid dispersal of dust in the air (i.e., clearing dust surfaces

with compressed air). 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.

#### **SECTION 7: Handling and storage**

## Handling

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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. 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.

: Drilling Mud Additive Use

## SECTION 8: Exposure controls/personal protection

#### Ingredients with workplace control parameters

JΡ

Components	Basis	Value	Control parameters	Note
Crystalline Silica	JP OEL JSOH	OEL-C	0.03 mg/m3	1, Respirable dust

<sup>1</sup> Group 1: carcinogenic to humans

#### **Engineering measures**

Adequate ventilation to control airborned 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

If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:. Air-Purifying Respirator for Dusts and Mists / P100. A positive pressure, airsupplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

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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**

#### 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

Molecular weight : Not applicable

pH : Not applicable

Pour point : No data available

Boiling point/boiling range : Not applicable

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Vapor pressure : Not applicable

Relative density : Not applicable

Density : 1.60 g/cm3

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**

**Reactivity**: Stable at normal ambient temperature and pressure.

Chemical stability : This material is considered stable under normal ambient and

anticipated storage and handling conditions of temperature

and pressure.

## Possibility of hazardous reactions

**Hazardous reactions** : Further information: No decomposition if stored and applied as

directed.

Conditions to avoid : Generation of Dusts.

Materials to avoid : May react with oxygen and strong oxidizing agents, such as

chlorates, nitrates, peroxides, etc.

Thermal decomposition : No data available

**Hazardous decomposition** 

products

: Iron Oxides

Sulfur oxides

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

## **SECTION 11: Toxicological information**

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Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg

Method: Calculation method

Acute dermal toxicity

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Sulfomethylated Quebracho

No data available

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Skin irritation : May cause skin irritation and/or dermatitis.

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Eye irritation : Product dust may be irritating to eyes, skin and respiratory

system.

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 Method: OECD Guideline 422 NOAEL Parent: 1,000 mg/kg

Fertility and developmental toxicity tests did not reveal any

effect on reproduction.

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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.

**CMR** effects

Crystalline Silica : Carcinogenicity: Human carcinogen.

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**Further information** : No data available.

#### **SECTION 12: Ecological information**

## 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)

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

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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

Biodegradability : Not applicable

Elimination information (persistence and degradability)

Bioaccumulation : This material is not expected to bioaccumulate.

Mobility : No data available

Additional ecological

information

: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., 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.

#### **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 : 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.

#### **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).

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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.

# 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.

Maritime transport in bulk according to IMO instruments

#### **SECTION 15: Regulatory information**

## **National legislation**

**Poisonous and Deleterious Substances Control Law** 

: Not applicable

#### **Industrial Safety and Health Law**

Substances Subject to be Notified Names Article 57-2 (Enforcement Order Table 9) : Sulfuric acid, iron(2+) salt (1:1), monohydrate(352)

Crystalline Silica( 165 Ø 2 )

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Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)

Harmful Substances Required

Permission for Manufacture

Hazardous Substances Subject to Labeling Requirements Article 57 (Enforcement Order Article

18)

Ordinance on Prevention of Organic Solvent Poisoning

Ordinance on Prevention of

Lead Poisoning

Harmful Substances

Prohibited from Manufacture Ordinance on Prevention of

Hazards Due to Specified Chemical Substances

Ordinance on Prevention of Tetraalkyl Lead Poisoning : Not applicable

: Sulfuric acid, iron(2+) salt (1:1), monohydrate (352)

Crystalline Silica (165 Ø 2)

: Not applicable

Not applicable

: Not applicable

Substances Prevented From

Impairment of Health

: Not applicable

Listed

### **Chemical Substance Control Law**

 Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

: Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

: Not applicable

Other regulations

Fire Service Law : Not applicable to dangerous materials / designated flammables.

High Pressure Gas Safety Act : Not applicable

Explosive Control Law : Not applicable

Vessel Safety Law : Not regulated as a dangerous good

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Aviation Law : Not regulated as a dangerous good

**Notification status** 

Europe REACH : A substance or substances in this product is not

registered or notified to be registered. Importation or manufacture of this product is still permitted provided that it does not exceed the REACH minimum threshold

quantity of the non-regulated substances.

Switzerland CH INV : Not in compliance with the inventory

United States of America (USA) : On or in compliance with the active portion of the

TSCA TSCA inventory

Canada DSL : All components of this product are on the Canadian

DSL

Australia AIIC : On the inventory, or in compliance with the inventory

New Zealand NZIoC : On the inventory, or in compliance with the inventory

Notification number: HSR002512

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 or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s).

Japan ENCS : Not in compliance with the inventory Philippines PICCS : Not in compliance with the inventory Taiwan TCSI : Not in compliance with the inventory

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

Philippines PICCS : Not in compliance with the inventory

## **SECTION 16: Other information**

#### **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%	
AIIC	Australian Inventory of Industrial Chemicals	LOAEL	Lowest Observed Adverse Effect Level	
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency	

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NDSL	Canada, Non-Domestic	NIOSH	National Institute for Occupational
	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	OSHA	Occupational Safety & Health
	Scenario Tool		Administration
EOSCA	European Oilfield Specialty	PEL	Permissible Exposure Limit
	Chemicals Association		·
EINECS	European Inventory of Existing	PICCS	Philippines Inventory of
	Chemical Substances		Commercial Chemical Substances
MAK	Germany Maximum Concentration	PRNT	Presumed Not Toxic
	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	TLV	Threshold Limit Value
	on Cancer		
IECSC	Inventory of Existing Chemical	TWA	Time Weighted Average
	Substances in China		
ENCS	Japan, Inventory of Existing and	TSCA	Toxic Substance Control Act
	New Chemical Substances		
KECI	Korea, Existing Chemical	UVCB	Unknown or Variable Composition,
-	Inventory	-	Complex Reaction Products, and
	, , ,		Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials
			Information System
LC50	Lethal Concentration 50%	ATE	Acute toxicity estimate

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