



Poly-Drill Drilling Systems

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MATERIAL SAFETY DATA SHEET/FICHE SIGNALÉTIQUE

1. PRODUCT IDENTIFICATION

PRODUCT TRADE NAME: Poly Drill CT II
CHEMICAL DESCRIPTION: Potassium Acetate Solution in water, copolymer of acrylamide with diallyldimethylammonium chloride
UPDATED: January 17, 2007

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component CAS Reg Number WHMIS

Hazard Percentage:

Copolymer of acrylamide with diallyldimethylammonium chloride is a suspected carcinogen. 26590-05-6 N
Acrylamide 79-06-1 Y <0.10. This product has a quality assurance of less than 0.1% of the acrylamide monomer.

INGREDIENT	% W/W	TLV	CAS NO
POTASSIUM ACETATE	30-60	N/E	127-08-2

Note: *Recommended

N/E – Not established, N/A-Not applicable

3. PHYSICAL DATA

Boiling Point: >100°C (212 °F) at 760 MMHG
Specific Gravity (@ 25 Deg.C.): 1.09
Solubility in Water: Soluble
pH: 7.0 to 9.0 (1.0% solution)
Vapor Pressure: <23.5 MMHG at 25°C (77°F)
Specific Gravity: 1.27 @ 20°C (68°F)
Freezing Point: -20°C
Physical State: Viscous liquid
Appearance and Odor: Red. Characteristic slight odor.

4. FIRE AND EXPLOSION DATA

Flash Point: >93.3°C (200°F)
Method used: Pensky-Martens Closed Cup
Conditions of flammability: Will burn after drying
Hazardous combustion products: Oxides of carbon and nitrogen.
Upper and Lower flammable limits: No Data
Extinguishing media: (Small fires): dry chemical, carbon dioxide. Recommended
(large fire): alcohol foam, universal foam, water spray.

NOT recommended: water jet (frothing possible).

Product will normally not burn unless under severe fire conditions. However, dehydrated residue will burn.

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

5. REACTIVITY

Chemical stability: This product is stable under normal handling and storage conditions.

Hazardous Polymerization: Cannot occur.

Incompatible substances: Avoid strong oxidizing and mineral acids.

Hazardous decomposition products: Not applicable.

6. HEALTH HAZARD DATA

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment.

TOXICITY RATING: Practically non-harmful.

Routes of Exposure and Effects:

SKIN: Slight irritant: prolonged contact may cause skin irritation or dermatitis in some individuals

EYE: Causes moderate irritation, redness, tearing, and swelling.

INHALATION: May cause discomfort or irritation to nasal and respiratory passages.

INGESTION: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

OTHER: This product contains potassium salts. Ingestion of large amounts (25 or more grams) of potassium salts usually causes a person to vomit. If the person is not suffering from a preexisting kidney and or cardiac conditions, the absorbed potassium salt is excreted in the urine.

This product is slightly irritating to the eyes and could cause prolonged impairment of vision. The degree of injury will depend on the amount of material that gets into the eye and the speed of eye flushing.

Exposure limits: Contains trace acrylamide (SKIN). Exposure limit, TWAEV=0.03 mg/m(ONT. Reg. 654/86).

Contains traces of isopropanol. Exposure limit, TWAEV=400ppm, STEV=500ppm(ONT. Reg. 654/86).

Carcinogenicity: This product contains traces of acrylamide. Acrylamide is listed by IARC(Group 2B) and ACGIH(Group A2) as a possible human carcinogen.

Teratogenicity: Not available.

Mutagenicity: Not available.

7. EMERGENCY AND FIRST AID PROCEDURES

SKIN: Wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use. If irritation or abnormalities persist, call a physician.

EYE: Immediately flush eyes with water for 15 minutes, lifting upper and lower lids occasionally. Get medical attention.

INHALATION: Remove to fresh air. If breathing becomes difficult, give oxygen and call a physician.

INGESTION: Do not induce vomiting: Call a physician immediately or poison control center. Never give anything by mouth to an unconscious person. Seek medical advice.

8. INDUSTRIAL HYGIENE CONTROL MEASURES

Respiratory Protection: If overexposure has been determined or documented, a NIOSH/MSHA jointly approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation: If mist and/or vapors are present, use air purifying respirator or self-contained breathing apparatus, but this is rarely required.

Eye Protection: Safety glasses, if personally preferred

Gloves: Generally not necessary. Personal preference.

9. HANDLING AND USE PRECTIONS

Storage requirements: keep container closed when no in use. Store in a cool dry location away from oxidizing and reducing agents.

Waste Disposal: product should be disposed of in accordance with applicable local, Provincial and Federal regulations.

Steps must be taken if product is released or spilled: clean spill areas thoroughly to avoid hazardous slippery conditions.

10. TOXICOLOGICAL PROPERTIES

The Microtox bioassay has been established as the reference test for mud additive toxicity testing.

Test Method: Luminescent Bacteria, IC50@ 15 min

Reference: Appendix 1: Microtox Bioassay Procedure, Drilling Waste Management, Guide G50. 1993. Alberta Energy and Utilities Board, Calgary, AB, Canada.

Treatment: pH adjusted to 6.3

Preparation: Sample was diluted to 2 g/L. The sample was then centrifuged for 1 hour.

IC50 Microtox Analysis prepared by HydroQual Laboratories, Calgary, AB--97/07/23 Test#971127, Sample#97556-2

Test Description	IC20	IC50	Pass/Fail
MTX	29 (26 - 32)	>91	PASS

HUMAN HAZARD CHARACTERIZATION:

Based on our Hazard Characterization, the potential human hazard is: LOW

11. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Liquid Drilling Fluid

Hazard Class: Not hazardous

Hazardous Substances: None

Cautionary Labeling: None required

12. REGULATORY INFORMATION

Inventory Status:

UNITED STATES (TSCA) Y
CANADA (DSL) Y
EUROPE (EINECS/ELINCS) P
AUSTRALIA (AICS) Y
JAPAN (MITI) N
SOUTH KOREA (KECL) Y

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

Inventory Issues: All functional components of this product are listed on the TSCA inventory.

WHMIS Classification: NOT CONTROLLED

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS contains all the information required by the CPR

13. OTHER INFORMATION

National Fire Protection Association Hazard Ratings – NFPA (R):

0	Health Hazard Rating – Minimal
1	Flammability Rating – Slight
0	Instability Rating – Minimal

National Paint & Coating Hazardous Materials Identification System – HMIS (R):

0	Health Hazard Rating – Minimal
1	Flammability Rating – Slight
0	Reactivity Rating – Minimal

Key Legend Information:

ACGIH – American Conference of Governmental Industrial Hygienists

OSHA – Occupational Safety and Health Administration

TLV – Threshold Limit Value

PEL – Permissible Exposure Limit

MTX – Microtox Bioassay Test

TWA – Time Weighted Average

STEL – Short Term Exposure Limit

NTP – National Toxicology Program

IARC – International Agency for Research on Cancer

The information herein is given in good faith but no warranty, expressed or implied, is made.