

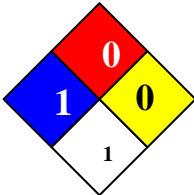




Material Safety Data Sheet

Protective Equipment	TDG	WHMIS
  See SECTION VIII for details	Shipping Name: NOT DANGEROUS GOODS TDG Classification: Not Applicable UN Number (PIN): Not Applicable Packing Group: Not Applicable Emergency Response Guide Number: Not Registered Emergency Phone: (403) 266 6000 See SECTION XIV for details	NOT A WHMIS PRODUCT See SECTION XV for details
	DOT	NFPA
CAL	Shipping Name: NOT HAZMAT GOODS HAZMAT Classification: Not Applicable UN Number (PIN): Not Applicable Packing Group: Not Applicable Emergency Phone: (403) 266 6000	

SECTION I: Chemical Product and Company Identification

Common/Trade Name	DWP-612-1
Synonyms	Not Available
Chemical Name	Not Available
Chemical Formula	Not Available
Chemical Family	Anionic water soluble polymer
Supplier	Calfrac Well Services Ltd. 411-8 th Avenue SW Calgary, Alberta T2P 1E3
Document Number	MSDS-DWP-612-1 Rev 0
Date of Preparation	February 5, 2010
Prepared By	Calfrac Well Services Ltd
Phone number of Preparer	(403) 266 6000
Material Uses	Friction Reducer

SECTION II: Hazardous Ingredients

Name	Percent (%)	CAS#	LD ₅₀ (oral rat)	LC ₅₀ (dermal rabbit)	LC ₅₀ (inhalation rat)
No Hazardous Ingredients					

SECTION III: Hazards Identification

Routes of Entry	[XX] SKIN [XX] EYE CONTACT <input type="checkbox"/> INHALATION [XX] INGESTION
Threshold Limit Value	Not determined
Skin Contact	May cause irritation with redness and pain.
Eye Contact	May cause irritation, redness and pain.
Ingestion	May cause vomiting, diarrhea, and abdominal cramps
Inhalation	Not expected to be a inhalation hazard

SECTION IV: First Aid Measures

Skin Contact	Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.
Ingestion	Do not induce vomiting. If conscious, dilute by giving two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.
Inhalation	Remove to fresh air. Get medical attention for any breathing difficulty.

SECTION V: Fire Fighting Measures

Flash Point (method)	>93 °C
Flammable Limits	Not determined
Extinguishing Media	Water spray, dry chemical, alcohol foam, or carbon dioxide.
Special Fire Fighting Procedures	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.
Unusual Fire and Explosion Hazards	Water will cause extreme slipperiness

SECTION VI: Accidental Release Measures

Steps to be taken in case the Material is Spilled or Released	Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.
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SECTION VII: Handling and Storage

Precautions to be taken in Handling and Storing	Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities.
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SECTION VIII: Exposure Control/Personal Protection

Special Protection Information	
Respiratory Protection	Use NIOSH approved organic vapor cartridge respirator when ventilation is inadequate.
Ventilation	A system of local and/or general exhaust is recommended
Protective Gloves	Wear protective gloves and clean body-covering clothing.
Eye Protection	Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.
Other Protective Equipment (Specify)	None known

SECTION IX: Physical and Chemical Properties

Appearance	Milky viscous liquid
Odor	Aliphatic
Specific Gravity	1.04
Boiling Point (°C)	Not Determined
Melting Point (°C)	Not Determined
Solubility in Water	Forms Gel
Percent Volatile by Volume	Not Determined
Evaporation Rate	Not Determined

Vapor Pressure (mm Hg)	0.13 @ 20 °C
Vapor Density (Air = 1)	Not Determined
pH	4-8 (5g/l)

SECTION X: Stability and Reactivity

Stability	<input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE
Incompatibility (Conditions to Avoid)	Oxidizing Agents
Conditions of Reactivity	Not known
Hazardous Decomposition Products	SO, NO, CO
Hazardous Polymerization	<input checked="" type="checkbox"/> WILL NOT OCCUR <input type="checkbox"/> MAY OCCUR

SECTION XI: Toxicological Information

Sensitization to Product	Not Determined
Carcinogenicity	Not Determined
Irritancy to Product	Not Determined
Reproductive Toxicity	Not Determined
Teratogenicity	Not Determined
Mutagenicity	Not Determined
Chronic Exposure	Not Determined
Name of Toxicological Synergistic Products	Not Determined

SECTION XII: Ecological Information

Ecological Information	Not Determined
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SECTION XIII: Disposal Considerations

Waste Disposal Method	Absorb spilled material with absorbent compound, incinerate/dispose to conform to local regulations
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SECTION XIV: Transportation Information

Proper Shipping Name	NOT DANGEROUS GOODS/HAZMAT
Class	Not Applicable
TDG Label	No
UN Number (PIN)	Not Applicable
TDG Placard	No
Packing Group	Not Applicable
Emergency Response Guide Number	Not Registered
Emergency Telephone	(403) 266 6000

SECTION XV: Regulatory Information

WHMIS Classification	Class	Division	Subdivision
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR			

SECTION XVI: Other

Other Information	February 5, 2010, Information transferred from supplier MSDS
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The information contained herein is offered only as a guide to the handling of this specific product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied. Calfrac Well Services Ltd. will not be liable for any damages, losses, injuries, or consequential damages, which may result from the use of or reliance on any information contained herein.