



Section 1: Product & Company Information

Product Name: Power Clean
Chemical Family: 4-Isopropenyl-1-Methylcyclohexene
Product Use: Drilling Fluid Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	B-3	Combustible Liquid	Combustible Liquid
	D-2-B	Materials Causing Other Toxic Effects - Toxic	Skin and eye irritant

Manufacturer Name: Bri-Chem Supply Ltd.
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MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
D-Limonene	100%	5989-27-5

Section 3: Hazards Identification

Emergency Overview: Treatment based on sound judgment of physician and individual reactions of patient.

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: Yes
Inhalation: Yes
Ingestion: Yes

Potential Health Effects:

Skin:	May cause moderate skin irritation.
Eye:	May irritate eyes.
Inhalation:	Vapour may be irritating to throat, lungs, and pulmonary tract.
Ingestion:	May be harmful if swallowed.

Section 4: First Aid Measures

Eye Contact:	In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention immediately after flushing.
Skin Contact:	Remove contaminated clothing and launder before re-use. Wash contaminated skin with mild soap and water for 15 minutes. Seek medical attention if irritation persists.
Inhalation:	Remove patient to fresh air. If not breathing, administer artificial respiration. If breathing is difficult, administer oxygen. Seek immediate medical attention.
Ingestion:	DO NOT induce vomiting, unless directed to do so by medical personnel. Never give anything by mouth if patient is rapidly losing consciousness, is unconscious or is convulsing. Seek immediate medical attention.
Other First Aid:	Treatment based on sound judgment of physician and individual reactions of patient.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	N/A
Extinguishing Media:	Carbon dioxide, dry chemicals, foam
Flashpoint:	43.3°C Closed Cup
Upper Flammable Limit:	N/A
Lower Flammable Limit:	N/A
Autoignition Temperature:	N/A
Protective Equipment:	Firefighters should wear full protective clothing, including self-contained breathing equipment. Spray extinguishing media directly into base of the flames. Water is unsuitable for use on burning materials, but may be used to cool containers exposed to heat.
Sensitivity To Impact or Static Discharge:	N/A
Hazardous Combustion Products:	Oxides of carbon
Fire Comment:	

Section 6: Accidental Release Measures

- Personnel Precautions:** Use proper personal protective equipment as listed in section 8.
- Spill Cleanup Measures:** Wear appropriate protective equipment. Prevent entry into sewers or streams. Dike if needed. Eliminate all ignition sources. Ventilate area. Absorb with an inert dry material and place in an appropriate waste disposal container.

Section 7: Handling & Storage

- Handling:** Ensure that eyewash stations and safety showers are proximal to the workstation location. Do not ingest. Avoid prolonged contact with eyes or prolonged skin contact. Use good personal hygiene.
- Storage:** Store in accordance with good industrial practices.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

- Engineering Controls:** Local exhaust ventilation as necessary to maintain exposures to within applicable limits.
- Personal Protective Equipment:** Wear oil-resistant gloves. The selection of personal protective equipment varies depending upon conditions of use. Impervious clothing, chemical goggles. Wear a faceshield if splashing hazard exists.
- Respiratory Protection:** If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved organic vapour respirator.
- Exposure Limits:** N/A

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
D-Limonene	Not Available	Not Available

Section 9: Physical & Chemical Properties

- Physical State:** Liquid
- Odour And Appearance:** Clear liquid; citrus odour
- Odour Threshold:** Low
- Boiling Point:** N/A
- Evaporation Rate:** N/A
- Melting Point:** N/A
- Freezing Point:** N/A
- Specific Gravity:** 0.84
- Solubility in Water:** Insoluble in water

Vapour Density:	N/A
Vapour Pressure:	N/A
pH:	N/A
Flash Point:	43.3°C Closed Cup
Volatility (% by volume):	N/A
Coefficient of Water to Oil distribution:	N/A

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	
Incompatible Substances:	Strong oxidizing agents
Special Decomposition Products:	Oxides of carbon, smoke, unidentified organic compounds

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
D-Limonene	Not Available	Not Available	Not Available

Effects Of Acute Exposure:	N/A
Effects Of Chronic Exposure:	Has been shown to cause kidney effects in laboratory animals through ingestion. Similar effects have not been reported in humans.
General Irritancy Of Product:	N/A
Sensitization:	N/A
Carcinogenicity:	N/A
Reproductive Toxicity:	N/A
Teratogenicity:	N/A
Embryotoxicity:	Not Available
Mutagenicity:	N/A
Synergistic Products:	N/A

Section 12: Ecological Information

Ecotoxicity:	Not Available
Environmental Fate:	Not Available

Section 13: Disposal Considerations



Waste Disposal: Disposal of all wastes must be done in accordance with municipal, provincial, and federal regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

Section 14: Transport Information

TDG Classification: 3
DOT UN Number: 2319
Shipping Notes: N/A

Section 15: Regulatory Information

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This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: March 24, 2010
MSDS Revision Notes:
MSDS Author: Bri-Chem Supply Ltd.

Disclaimer: This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment. Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet.