






## Section 1: Product & Company Information

**Product Name:** 822 Invert  
**Chemical Family:** Petroleum Distillate  
**Product Use:** Drilling Fluid

### Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	B-3	Combustible Liquid	Combustible Liquid
	D-1-B	Materials Causing Immediate/Serious Toxic Effects - Toxic	Immediate serious toxic effects
	D-2-B	Materials Causing Other Toxic Effects - Toxic	Skin and eye irritant
	E	Corrosive Materials	Corrosive

**Manufacturer Name:** HiTech Fluid Systems  
**Address:** #1800, 505 3rd Street SW, Calgary, AB T2P 3E6 Canada  
**General Phone Number:** (403)547-2906  
**General Fax Number:** (403)547-3129  
**MSDS Revision Date:** June 1, 2008  
**Supercedes:** June 23, 2005  
**Prepared By:** HiTech Fluid Systems  
**Preparer's Phone:** (403)547-2906

## Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Petroleum Hydrocarbons	< .5	64741-44-2
Calcium Hydroxide	1-5	1305-62-0
Calcium Chloride		10043-52-4
Heavy Aromatic Naptha	< .5	64742-94-5
Petroleum Distillate	60-100	64741-44-2

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## Section 3: Hazards Identification

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**Emergency Overview:** Provide general supportive measures (comfort, warmth, rest). Consult a physician for all exposures, except minor instances of inhalation or contact. NOTE TO PHYSICIAN: Gastric lavage should only be done after endotracheal intubation, in view of the risk of aspiration, which can cause serious chemical pneumonitis.

### Routes of Entry:

**Skin Contact:** Yes

**Skin Absorption:** Yes

**Eye Contact:** Yes

**Inhalation:** Yes

**Ingestion:** Yes

### Potential Health Effects:

**Skin:** Moderately irritating. Repeated or prolonged contact may result in defatting, oil acne, redness, itching, inflammation, cracking, and possible secondary infection. Contact with heated material may cause thermal burns.

**Eye:** Slight irritating. Corrosive; may cause redness and pain, discomfort, and blurring.  
Rabbit Draize = 3.7/110 @ 1 hours

**Inhalation:** Moderately toxic. May be irritating to respiratory tract. High vapour concentrations can displace oxygen and cause central nervous system depression, visual disturbances, nausea, vomiting, systematic poisoning, and death.

**Ingestion:** May be harmful if liquid is ingested or aspirated. May cause irritation and burning of mouth and throat, abdominal pain, central nervous system depression, visual disturbances, nausea, and vomiting.

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## Section 4: First Aid Measures

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**Eye Contact:** Immediately flush the contaminated eye(s) with warm water for at least 15 minutes. If irritation persists, obtain medical attention.

**Skin Contact:** Flush contaminated area with warm water for at least 15 minutes. Under running water, remove contaminated clothing, shoes, and leather goods. If irritation persists, obtain medical attention.

**Inhalation:** Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek immediate medical attention.

**Ingestion:** Never give anything by mouth if victim is unconscious or convulsing. Rinse mouth thoroughly with water. DO NOT induce vomiting. Have patient drink 300 ml of milk to dilute material. Seek immediate medical attention.

**Other First Aid:** Provide general supportive measures (comfort, warmth, rest). Consult a physician for all exposures, except minor instances of inhalation or contact. NOTE TO PHYSICIAN: Gastric lavage should only be done after endotracheal intubation, in view of the risk of aspiration, which can cause serious chemical pneumonitis.

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## Section 5: Fire Fighting Measures

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**Conditions Of Flammability:** At elevated temperatures

**Extinguishing Media:** Water spray or fog, CO<sub>2</sub>, dry chemical, foam, halon

**Flashpoint:** 94°C (minimum) TCC

**Upper Flammable Limit:** 6.0 (% by volume)

**Lower Flammable Limit:** 0.7 (% by volume)

**Autoignition Temperature:** >225°C

**Protective Equipment:** Firefighters should wear appropriate breathing apparatus.

**Sensitivity To Impact or Static Discharge:** None known. Ensure proper grounding.

**Hazardous Combustion Products:** CO<sub>x</sub>, NO<sub>x</sub>, SO<sub>x</sub>

**Fire Comment:**

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## Section 6: Accidental Release Measures

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**Personnel Precautions:** Use proper personal protective equipment as listed in section 8.

**Spill Cleanup Measures:** Provide adequate ventilation, protective clothing, and respirators. Remove sources of heat and flame. Absorb liquid on dry clay, sand sawdust, or other absorbent material. DO NOT flush to sewer.

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## Section 7: Handling & Storage

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**Handling:** Use minimal quantities in designated areas with adequate ventilation and away from sources of heat or sparks. Containers should be covered when not in use. Empty containers can present an explosion or fire hazard even when empty. DO NOT cut, puncture or weld on or near containers.

**Storage:** Store in tightly closed containers in a cool area away from immediate work areas and incompatible materials. No sources of heat, flames, or sparks should be present in the storage area.

## Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

**Engineering Controls:** General ventilation is normally adequate for small scale use at room temperature or below. Local exhaust ventilation is normally needed with large-scale use or at elevated temperatures.

**Personal Protective Equipment:** Chemical goggles or facemask, gloves, coveralls, boots as needed to prevent skin exposure. DO NOT use natural rubber or PVC.

**Respiratory Protection:** Up to 5 mg/m<sup>3</sup> (oil mist) none required, from 5-50 mg/m<sup>3</sup>, use an approved organic vapour respirator suitable for oil mist. Above 50mg/m<sup>3</sup>, use full face air supplied or self-contained breathing apparatus.

**Exposure Limits:** ACGIH TLV = 400 ppm (TWA)

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Petroleum Hydrocarbons	Not Available	Not Available
Calcium Hydroxide	5 (TWA) 8/40h	5 (TWA) 8/40h
Calcium Chloride	Not Available	Not Available
Heavy Aromatic Naptha	Not Determined	Not Determined
Petroleum Distillate	N/A	N/A

## Section 9: Physical & Chemical Properties

<b>Physical State:</b>	Liquid
<b>Odour And Appearance:</b>	Lt - dk brown opaque liquid; hydrocarbon odour
<b>Odour Threshold:</b>	Hydrocarbon odour
<b>Boiling Point:</b>	180-320°C
<b>Evaporation Rate:</b>	Not Available
<b>Melting Point:</b>	Not Applicable
<b>Freezing Point:</b>	Not Available
<b>Specific Gravity:</b>	0.97-1.20
<b>Solubility in Water:</b>	Insoluble in water
<b>Vapour Density:</b>	4 (air =1)
<b>Vapour Pressure:</b>	30mm @38°C
<b>pH:</b>	11.4
<b>Flash Point:</b>	94°C (minimum) TCC
<b>Volatility (% by volume):</b>	At 20°C 25% in 10 hours. (approx.)
<b>Coefficient of Water to Oil distribution:</b>	Insoluble in water

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## Section 10: Stability & Reactivity

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<b>Chemical Stability:</b>	Yes
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Conditions Of Chemical Instability:</b>	None known
<b>Incompatible Substances:</b>	Oxidizing substances
<b>Special Decomposition Products:</b>	CO <sub>x</sub> , SO <sub>x</sub> , smoke on combustion

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## Section 11: Toxicological Information

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Chemical Name	LD <sub>50</sub> (Oral Rat)	LD <sub>50</sub> (Dermal Rabbit)	LC <sub>50</sub> (Inhalation Rat)
Petroleum Hydrocarbons	>5 mg/kg	Not Determined	Not Determined
Calcium Hydroxide	Not Available	Not Available	Not Available
Calcium Chloride	1000 mg/kg	Not Available	Not Available
Heavy Aromatic Naptha	3000 mg/kg	3000 mg/kg	Not Determined
Petroleum Distillate	5000 mg/kg	2000 mg/kg	1700 mg/m <sup>3</sup> per 4 h

<b>Effects Of Acute Exposure:</b>	Exposure to high concentrations of oil mist may lead to oil pneumonia. Severe exposure may cause cardiac sensitization and irregular heart rhythm.
<b>Effects Of Chronic Exposure:</b>	May cause depression, dizziness, numbness, tremors, impaired memory, headaches, and nausea.
<b>General Irritancy Of Product:</b>	Liquid and vapour may cause irritation of the skin, eyes, nose, throat, and respiratory system.
<b>Sensitization:</b>	None known
<b>Carcinogenicity:</b>	None known
<b>Reproductive Toxicity:</b>	None known
<b>Teratogenicity:</b>	Not Available
<b>Embryotoxicity:</b>	Not Available
<b>Mutagenicity:</b>	None known
<b>Synergistic Products:</b>	Not Available

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## Section 12: Ecological Information

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<b>Ecotoxicity:</b>	Not Available
<b>Environmental Fate:</b>	Not Available

## Section 13: Disposal Considerations

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**Waste Disposal:** Combustible wastes may be burned in an approved incineration facility. Consult local authorities before disposal.

## Section 14: Transport Information

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**TDG Classification:** Not Regulated





**DOT UN Number:** Not Regulated

**Shipping Notes:**

## 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.

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## Section 16: Additional Information

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**MSDS Revision Date:** June 1, 2008

**MSDS Revision Notes:**

**MSDS Author:** HiTech Fluid Systems

**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.