



MATERIAL SAFETY DATA SHEET

Trade Name: **PassiVator I™**

Revision Date: 22-Dec-09

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: PassiVator I™
Chemical Family: Mixture
Applications: Oil well drilling fluid additive
Emergency Telephone (24 hr.): (ChemTrec) 800-424-9300
Supplied by: **HiTech Fluid Systems Ltd.**
1800, 505 - 3rd Street S.W.
Calgary, AB T2P 3E6
Tel: 403.547.2906
Fax: 403.547.3129
www.hitechfluid.com

Revision Number: 5

HMIS Rating
Health: 1 **Flammability:** 1 **Physical Hazard:** 0 **PPE:** J

HMIS Key: 4=Severe, 3=Serious, 2=Moderate, 1=Slight, 0=Minimal Hazard. *Chronic effects - See Section 11. See Section 8 for Personal Protective Equipment recommendations.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS No.	Wt. %	Comments:
Polyglycol blend		100	No comments.

3. HAZARDS IDENTIFICATION

Emergency Overview: Occupational exposure not expected to present a health or physical hazard. Prolonged exposure, however, may cause eye, skin and respiratory irritation.

Canadian Classification:
UN PIN No: Not regulated **WHMIS Class:** Not a controlled product

Physical State: Viscous Liquid **Odor:** Mild Sweet **Color:** Colorless

Potential Health Effects:

Acute Effects

Eye Contact: Not expected to irritate eyes. Prolonged contact, however, may cause irritation.
Skin Contact: Not expected to irritate skin. Prolonged contact, however, may cause irritation.
Inhalation: Not expected to be an inhalation hazard. Prolonged inhalation of vapors or mists, however, may cause irritation.
Ingestion: May cause gastric distress, nausea and vomiting of ingested.

Carcinogenicity & Chronic Effects: See Section 11 - Toxicological Information

Routes of Exposure: Eyes. Dermal (skin) contact. Inhalation.

Target Organs/ Medical Conditions Aggravated by Exposure: None expected from occupational exposure.

4. FIRST AID MEASURES

Eye Contact:	Promptly wash eyes with lots of water while lifting eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
Skin Contact:	Wash skin thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if any discomfort continues.
Inhalation:	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:	Dilute with 2 - 3 glasses of water or milk, if conscious. Never give anything by mouth to an unconscious person. If signs of irritation or toxicity occur, seek medical attention.
General Notes:	Persons seeking medical attention should carry a copy of this MSDS with them.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: F (C):	>330F (166C)
Flash Point Method:	PMCC
Flammable Limits in Air - Lower (%):	ND
Flammable Limits in Air - Upper (%):	ND
Autoignition Temperature: F(C)	ND
Flammability Class:	IIIB
Other Flammable Properties:	ND
Extinguishing Media:	Carbon dioxide. Dry chemical. Foam. Water mist.

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures:	Do not enter fire area without proper personal protective equipment, including NIOSH/MSHA approved self-contained breathing apparatus. Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Keep water run off out of sewers and waterways.
Hazardous Combustion Products:	Oxides of: Carbon. Aldehydes. Ketones. Organic acids.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Use personal protective equipment identified in Section 8.
Spill Procedures:	Evacuate surrounding area, if necessary. Keep personnel removed and upwind of spill. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Shut off leak if it can be done safely. Contain spilled material. Absorb in vermiculite, dry sand or earth. Place into containers for disposal.
Environmental Precautions:	Do not allow to enter sewer or surface and subsurface waters. Waste must be disposed of in accordance with federal, state and local laws. In the U.S., for products with reportable quantity (RQ) components - if the RQ is exceeded, report to National Spill Response Office at 1 800 424 8802.

7. HANDLING AND STORAGE

- Handling:** Put on appropriate personal protective equipment. Avoid contact with skin and eyes. Avoid breathing vapors or spray mists. Use only in a well ventilated area. Wash thoroughly after handling.
- Storage:** Store in dry, well-ventilated area. Keep container closed. Keep away from heat, sparks and flames. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Limits (TLV & PEL = 8H TWA):

Ingredient	CAS No.	Wt. %	ACGIH TLV	OSHA PEL	Other	Notes
Polyglycol blend		100	NA	NA	10 mg/m ³ (aerosol) (AIHA WEEL)	None

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Personal Protection Equipment

- Eye/Face Protection:** Wear chemical safety goggles.
- Skin Protection:** Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear chemical resistant gloves such as nitrile or neoprene.
- Respiratory Protection:** If exposed to particulates/aerosols:
Use at least a NIOSH-approved N95 half-mask disposable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or reusable particulate respirator.
If exposed to organic vapors:
Use a NIOSH/MSHA-approved organic vapor respirator. CCROV: CCR with organic vapor cartridge.
A NIOSH/MSHA approved respirator with ammonia/methylamine cartridges should be used to protect against ammonia or amine inhalation exposure.
- Refer to Exposure Limits table (Section 8) for component specific respiratory protection recommendations.
- General Hygiene Considerations:** Wash promptly with soap and water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Color:** Colorless
- Odor:** Mild Sweet
- Physical State:** Viscous Liquid
- pH:** ND
- Specific Gravity (H₂O = 1):** >1.00 at 77F (25C)
- Solubility (Water):** Slightly
- Flash Point: F (C):** >330F (166C)
- Melting/Freezing Point:** ND
- Boiling Point:** ND
- Vapor Pressure:** ND
- Vapor Density (Air=1):** >1
- Evaporation Rate:** ND
- Odor Threshold(s):** ND

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions to Avoid:	Keep away from heat, sparks and flame.
Materials to Avoid:	Oxidizers. Isocyanates. Acids.
Hazardous Decomposition Products:	For thermal decomposition products, see Section 5.
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

Component Toxicological Data: Any adverse component toxicological effects are listed below. If no effects are listed, no such data were found.

Ingredient	CAS No.	Acute Data
Polyglycol blend		Oral LC 50: >2000 g/kg (rat)

Product Toxicological Information: No toxicological data is available for this product.

12. ECOLOGICAL INFORMATION

Ingredient	CAS No.	Acute Data
Polyglycol blend		LC50 96H static: 1,700,000 ug/l (Lepomis macrochirus (bluegill)); LC50 96H static: 650,000 ug/l (Menidia beryllina (inland silverside)); LC50 96H static: 10,000,000 ug/l (Oncorhynchus mykiss (rainbow trout))

Product Ecotoxicity Data: Contact MASI's Environmental Affairs Department for available ecotoxicity data

Biodegration	ND
Bioaccumulation:	ND
Octanol/Water Partition Coefficient:	ND

13. DISPOSAL CONSIDERATIONS

Waste Classification: This product does not meet the criteria of a hazardous waste if discarded in its purchased form.

Waste Management: Under U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user to determine at the time of disposal, whether the product meets RCRA criteria for the hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting materials hazardous. Empty containers retain residues. All labeled precautions must be observed.

Disposal Method: Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that the containers are empty by the RCRA criteria prior to disposal in a permitted industrial landfill.

14. TRANSPORT INFORMATION

U.S. DOT Shipping Description:	Not regulated for transportation by DOT, TDG, IMDG, ICAO/IATA.
Canada TDG Shipping Description:	Not regulated.
UN PIN No:	Not regulated
IMDG Shipping Description:	Not regulated

MATERIAL SAFETY DATA SHEET

Trade Name: PassiVator I™

Revision Date: 22-Dec-09

Page 5/5

15. REGULATORY INFORMATION

U.S. Federal and State Regulations

SARA 311/312 Hazard Categories: Not a SARA 311/312 hazard.

SARA 302/304, 313; CERCLA RQ, California Proposition 65: Note: If no components are listed below, this product is not subject to the referenced SARA and CERCLA regulations and is not known to contain a Proposition 65 listed chemical at a level that is expected to pose a significant risk under anticipated use conditions.

International Chemical Inventories

Australia AICS	Components are listed or exempt from listing.
Canada DSL	Contains a component(s) that is listed on the NDSL.
China Inventory	Contains a component that is not listed.
European Union EINECS	Components are listed or exempt from listing.
Japan METI ENCS	Contains a component that is not listed.
Korea TCCL ECL	Contains a component that is not listed.
Philippine PICCS	Contains a component that is not listed.
U.S. TSCA	Components are listed or exempt from listing.
U.S. TSCA	No components are subject to TSCA 12(b) export notification requirements.

Canadian Classification:

Controlled Products Regulations Statement: 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.

WHMIS Class: Not a controlled product

16. OTHER INFORMATION

The following sections have been revised: 1

NA – Not Applicable, ND – Not Determined

Disclaimer:

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We can not make any assertions as to its reliability or completeness; therefore, user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.