

## MATERIAL SAFETY DATA SHEET

### SECTION 1: PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

Product Name: **Titan TO-4 DRIVE TRAIN 50**

MSDS Number: D4845

Chemical Family: Mixture

Emergency Telephone Number: CHEMTREC 800-424-9300

Emergency Overview	Hazard Ranking	
Physical State: Liquid Color: Amber Odor: Mild May cause irritation to the eyes. Prolonged exposure may cause slight skin irritation. Spills may create a slipping hazard.	HMIS	NFPA
	Health 1	1
	Fire 1	1
	Reactivity 0	0

Key: 4=Severe, 3=Serious, 2=Moderate, 1=Slight, 0=Minimal

### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS No.</u>	<u>WT % (approx)</u>
Zinc alkyldithiophosphate	Confidential	

### SECTION 3: HAZARDS IDENTIFICATION

- May cause eye irritation.
- Prolonged exposure may cause redness, edema drying or cracking of skin.

This material is considered hazardous by the OSHA Hazard Communication Standard 29CFR 1910.1200.

### Section 4: FIRST AID MEASURES

**Eyes:** Flush immediately with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. Get medical attention if irritation develops or persists.

**Skin:** Wash skin thoroughly with soap and water. Remove contaminated clothing and shoes.

Launder contaminated clothing before reuse. Discard saturated leather gloves, belts and shoes. Seek medical attention if redness or irritation occurs.

**Inhalation:** Vaporization is not expected at ambient temperatures. This material is not expected to be an inhalation problem under the anticipated conditions of use. In case of overexposure, move person to fresh air. If breathing has stopped, resuscitate and administer oxygen if available. Seek medical attention immediately.

**Ingestion: Do not induce vomiting.** If the individual is conscious, give a glass of milk or water. Seek prompt medical attention. Do not attempt to give an unconscious person anything by mouth.

**Note to Physician:** Treat symptomatically.

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## SECTION 5: FIRE AND EXPLOSION HAZARD DATA

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**Flash Point:** 234°C (453°F)

**Method of Determination:** ASTM D92

**Extinguishing Media:** Carbon dioxide, Dry chemical, Foam, Water Fog

**Hazardous Combustion Products:** Toxic fumes, gases or vapors may evolve on burning.

**Fire Fighting:** For fires involving this material, do not enter any enclosed or confined fires space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of combustion products and oxygen deficiencies. Sealed containers may be cooled with water spray. Avoid spraying water directly into storage containers due to boil over and fire spread.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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Ensure your own health and safety before attempting spill control or clean up. Take the proper precautions see Section 1 for Emergency Overview, Section 8 for Personal Protection and Section 13 for Disposal Considerations.

### Land Spill

Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills clean up using appropriate techniques including absorbent materials or pumping and follow all precautions in Exposure Controls/Personal Protection. For large spills follow prescribed procedures for reporting and responding. Prevent liquid from entering sewers, watercourses, or low areas. If the liquid is too viscous for pumping, scrape it up. Consult an expert on disposal of recovered material and ensure conformity to local, State, or Federal disposal regulations.

### Water Spill

Remove from surface by skimming or with suitable absorbent. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Consult an expert on disposal of recovered material and ensure conformity to local, State and Federal disposal regulations.

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## SECTION 7: STORAGE AND HANDLING

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**Handling:** Keep containers closed when not in use. Thoroughly wash hands after handling material.  
**EMPTY CONTAINER WARNING:** "Empty" containers retain product residue (liquid and/or vapor), which may exhibit the hazards of the product. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner, or properly disposed of.

**Electrostatic Accumulation Hazard:** Use proper bonding and/or grounding procedures.

**Storage:** Keep containers closed. Store in a well ventilated area. Do not store near open flame, heat or other sources of ignition. Odorous and toxic fumes may form if stored at temperatures in excess of 45° C, 113° F.

**Storage Temperature:** 45° C, 113° F

**Storage/Transport Pressure mmHg:** Atmospheric

**Loading/Unloading Temperature:** Ambient

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## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

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### Exposure Guidelines:

COMPONENT	OSHA		ACGIH	
	TWA	STEL	TWA	STEL
Hydrotreated Distillate, Heavy Paraffinic (Oil mist)	5 mg/m <sup>3</sup>	N/E	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Additive Mixture (Oil Mist)	5 mg/m <sup>3</sup>	N/E	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Zinc Alkyldithiophosphate	N/E	N/E	N/E	N/E

**Exposure Controls:** The use of local exhaust ventilation is recommended to control process emissions near the source. Provide mechanical ventilation of confined spaces. See respiratory protection recommendations.

**Respiratory Protection:** Under normal conditions, a respirator is not required. If exposure exceeds the occupational exposure limits, follow OSHA standards and wear proper NIOSH.MSHA-approved respiratory equipment.

**Eye Protection:** Chemical goggles or safety glasses with side shields.

**Skin Protection:** Use chemical resistant gloves to avoid prolonged or repeated skin contact. The following materials may provide suitable chemical protection: Nitrile, Viton. Always check the manufacturer's recommendations. Gloves should be replaced if signs of degradation or chemical breakthrough occur. Long sleeve shirt is also recommended.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance:</b>	<u>Amber</u>
<b>Odor:</b>	<u>Mild petroleum odor</u>
<b>Flash Point:</b>	<u>234 Deg. C (453 Deg. F) by COC D92</u>
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	<u>0.897 @ 15.6 ° C</u>
<b>Solubility in Water:</b>	<u>Negligible</u>
<b>Physical State:</b>	<u>Liquid</u>
<b>Pour Point:</b>	<u>-18°C</u>
<b>Vapor Pressure (mmHg):</b>	<u>N/A</u>
<b>Vapor Density (AIR=1):</b>	<u>N/A</u>
<b>Evaporation Rate:</b>	<u>Negligible</u>
<b>Viscosity @ 100 Deg. C:</b>	<u>17.45 centistokes</u>
<b>Viscosity @ 40 Deg. C:</b>	<u>195.70 centistokes</u>

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## SECTION 10: STABILITY AND REACTIVITY

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**Stability:** Material is normally stable at room temperature and pressure.

**Incompatible Materials:** Strong oxidizing agents

**Conditions to avoid instability:** None

**Hazardous Decomposition Products Under Fire Conditions:** Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Trace amounts of hydrogen sulfide, alkyl mercaptans and sulfides may also be released. Under combustion conditions, the oxides of calcium, phosphorus, sulfur and zinc will be formed.

**Possible Hazardous Reactions:** None

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## SECTION 11: TOXICOLOGICAL INFORMATION

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**Eye Irritation:** May cause irritation based on component data.

**Skin Irritation:** Not expected to be a primary irritant based on component data. Prolonged or repeated contact may cause dermatitis. Symptoms include redness, edema, drying and cracking of the skin.

**Oral Toxicity:** The acute Oral LD50 in rats is >5 g/kg based on component data.

**Inhalation Toxicity:** No significant adverse health effects are expected to occur under normal conditions of use. However, exposure to petroleum mist at high levels may be irritating to the nose, throat and lungs. Based on component data.

**Carcinogenicity:** This product contains petroleum base oils, which may be refined by various processes including severe solvent extraction, severe hydrocracking or severe hydrotreating.

None of the oils require a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program Annual report nor have they been classified by the International Agency for Research on Cancer as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B). The IP346 test has not been used to evaluate all the oils in this product.

**Mutagenicity:** No Data

**Teratology (Birth Defect) Information:** No Data

**Reproduction Information:** No Data

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## SECTION 12: ECOLOGICAL INFORMATION

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This material is not expected to be readily biodegradable based on component data.

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## SECTION 13: DISPOSAL CONSIDERATIONS

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To determine the proper method of disposal, refer to RCRA (40 CFR 261) as well as federal EPA and state and local regulations. Conditions of use may cause this material to become a "Hazardous Waste", as defined by state or federal laws. Use approved treatment, transporters and disposal sites in compliance with all applicable laws.

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## SECTION 14: TRANSPORT INFORMATION

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<b>DOT Hazard Class:</b>	Not regulated
<b>UN/NA Number:</b>	None
<b>IMO:</b>	Not Regulated
<b>IATA:</b>	Not Regulated

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## SECTION 15: REGULATORY INFORMATION

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### Global Regulatory Information:

#### Inventory

**United States (TSCA)**

**Canada (DSL)**

**European Union (EINECS)**

**Japan (METI)**

**Philippines (PICCS)**

**South Korea (KECL)**

**Australia (AICS)**

**China**

#### Status

All ingredients are on the inventory.

All ingredients are on the inventory.

All ingredients are on the inventory.

All ingredients are on the inventory.

All ingredients are on the inventory.

All ingredients are on the inventory.

Contains a component that may not be on inventory.

Contains a component that may not be on inventory.

## U.S. Regulatory Information:

**SARA III, Section 313:** This product contains 0.1% as zinc

**CERCLA:** This product contains 0.1% as zinc.

### SARA 311 CLASSIFICATIONS:

Acute Hazard	Yes
Chronic Hazard	No
Fire Hazard	No
Reactivity Hazard	No

**SARA Extremely Hazardous Substance:** This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances list.

**Cal. Prop 65:** Based on information currently available, this product is not known to contain the chemicals known to the state of California to cause cancer or reproductive toxicity. If this product is reformulated or further processed, further evaluation should be done based upon such reformulation or processing, as well as upon its final composition and use.

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## SECTION 16: OTHER INFORMATION

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### DISCLAIMER OF LIABILITY

The information and recommendations contained herein are to the best of Delta's knowledge and belief, accurate and reliable as of the date issued. Delta does not warrant or guarantee their accuracy or reliability, and Delta shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If the buyer repackages this product, legal council should be consulted to ensure that proper health, safety and other necessary information is included on the container.

The Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) ratings have been included by Delta to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with Delta's interpretation of the available data.

**MSDS Number:** D4845

**Revision:** None

**Supersedes:** None

**FOR ADDITIONAL INFORMATION, CONTACT YOUR SALES REPRESENTATIVE.**