

# Safety Data Sheet

To comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

## TITRA-LUBE TBN TEST KIT

### SECTION 1 – COMPANY IDENTIFICATION

**Manufacturer:** Dexsil Corporation  
One Hamden Park Drive  
Hamden, CT 06517

**Emergency Telephone Number:**  
USA (800) 424-9300 (CHEMTREC)  
INT'L (703) 741-5970

**Telephone Number:** (203) 288-3509

**Email:** [info@dexsil.com](mailto:info@dexsil.com)

**Product Description:** The TITRA-LUBE TBN product line is a field test kit for quantitative determining Total Base Number in Industrial/Lubricating Oils.

### SECTION 2 – HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

##### **Ampule 1 (White-dot \ Isooctane)**

Flam. Liq. 2;H225 Highly Flammable liquid and vapor.  
Skin Corr. 1B;H314 Causes severe skin burns and eye damage.

Eye Dam. 1;H318 Causes serious eye damage.  
STOT SE 3;H336 May cause drowsiness or dizziness.

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##### **Ampule 2 (black-dot \ Hydrochloric Acid in Isopropanol)**

Flam. Liq. 2;H225 Highly Flammable liquid and vapor.  
Skin Corr. 1B;H314 Causes severe skin burns and eye damage.  
Eye Dam. 1;H318 Causes serious eye damage.

STOT SE 3;H336 May cause drowsiness or dizziness.

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##### **Ampule 3 (Ethanol)**

Flam. Liq. 2;H225 Highly Flammable liquid and vapor.

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##### **Ampule 4 (Sodium Chloride in water)**

No applicable GHS categories.

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##### **Plastic Syringe**

No applicable GHS categories.

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## 2.2. Label elements

### Ampule 1 (White-dot \ Isooctane)



**Danger**

- H225 Highly flammable liquid and vapor.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H336 May cause drowsiness and dizziness.

**[Prevention]:**

- P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.  
P241 Use explosion-proof electrical / ventilating / light / equipment.  
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

**[Storage]:**

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

**[Disposal]:**

P501 Dispose of contents / container in accordance with local / national regulations.

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### Ampule 2 (black-dot \ Hydrochloric Acid with Isopropanol)



**Danger**

- H225 Highly flammable liquid and vapor.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H336 May cause drowsiness and dizziness.

**[Prevention]:**

- P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.  
P241 Use explosion-proof electrical / ventilating / light / equipment.  
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

**[Storage]:**

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

**[Disposal]:**

P501 Dispose of contents / container in accordance with local / national regulations.

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### Ampule 3 (Ethanol)



**Danger**

- H225 Highly flammable liquid and vapor.

**[Prevention]:**

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P241 Use explosion-proof electrical / ventilating / light / equipment.

P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

**[Storage]:**

P403+233 Store in a well ventilated place. Keep container tightly closed.

**[Disposal]:**

P501 Dispose of contents / container in accordance with local / national regulations.

**Ampule 4 (Aqueous Solution \ Sodium Chloride in water)**

No applicable GHS categories.

**Plastic Syringe**

No applicable GHS categories.

For additional information on toxicity, please refer to Section 11.

**SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

The TITRA-LUBE TBN Test Kit consists of one test tube containing two ampules, one test tube containing one ampule and an aqueous solution, and a filled plastic syringe.

Component	Contents	CAS#	EC#	GHS Classification	% liquid
Ampule 1 (white-dot)	isooctane	540-84-1	208-759-1	Flam. Liq. 2;H225 Asp. Tox. 1;H304 Skin Irrit. 2;H315 STOT SE 3;H336 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	6.62%
Ampule 2 (black-dot)	Hydrochloric Acid	7647-01-0	231-595-7	Skin Corr. 1B;H314 STOT SE 3;H335	0.03%
Ampule 3	in Isopropanol	67-63-0	200-661-7	Flam. Liq. 2;H225 Eye Irrit. 2;H319 STOT SE 3;H336	5.74%
Ampule 3	Ethanol	64-17-5	200-578-6	Flam. Liq. 2;H225	3.10%
Aqueous Solution	Sodium Chloride	7647-14-5	231-598-3	--	14.99%
Aqueous Solution	in Water	7732-18-5	231-791-2	--	59.96%
Plastic Syringe	Sodium Hydroxide	1310-73-2	215-185-5	--	0.03%
Plastic Syringe	in Water	7732-18-5	231-791-2	--	9.53%
					100.00%

**SECTION 4 – FIRST AID MEASURES**

**First Aid**

In case of contact with reagents, rinse well with water. In case of inhalation, remove to fresh air.

**Eye Contact**

For all kit components, flush eyes with large amounts of water for 15 minutes. Seek medical attention.

**Skin contact**

Flush with large amounts of water. Use soap and water to wash away organic components.

**Inhalation**

In case of inhalation, remove to fresh air.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## **SECTION 5 – FIRE AND EXPLOSION HAZARD**

<b>Flash Point</b>	Isooctane	10°F	-12.2°C
	Isopropanol	53°F	11.7°C
	Ethanol	48°F	8.9°C
	Aqueous Solution	None	None
	Plastic Syringe	None	None

**Flammable Limit**      Unknown

**Extinguishing Media**    Dry chemical, foam, CO<sub>2</sub>

**Special Fire Fighting Procedures**    None

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Protection**    Chemical safety glasses and rubber gloves

**Spills and Leaks**      *Ampule 1 – Isooctane Ampule*  
Solvent absorbent recommended for spills. Wash spill area after material pickup.

*Ampule 2 – Hydrochloric Acid/Isopropanol Ampule*  
Absorb completely and dispose of as organic waste.

*Ampule 3 – Ethanol Ampule*  
Solvent absorbent recommended for spills. Flush area with water.

*Plastic Syringe – Sodium Hydroxide*  
Flush area with water and neutralize with dilute acid. Absorb completely.

## **SECTION 7 – HANDLING AND STORAGE**

**Protective equipment**      Wear appropriate safety equipment when performing the test on site.

**Storage**                      Store test kits in a cool, dry place. Check expiration date prior to performing test.

## **SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTIVE EQUIPMENT**

**Engineering Controls**                      None required

**Personal Protective Equipment (PPE)**

**Respiratory protection**                      None required during normal use.

**Ventilation**                                      Perform test only in a well-ventilated area.

**Protective gloves**                              Always wear rubber gloves when performing the TITRA-LUBE TBN test.

**Eye protection**                                Wear safety glasses.

**General Hygiene Measures**                      Avoid contact with skin, eyes and clothing. Wash after running tests.

## **SECTION 9 — PHYSICAL/CHEMICAL CHARACTERISTICS**

<b>Property</b>	<b><u>Ampule 1</u></b>	<b><u>Ampule 2</u></b>	<b><u>Ampule 3</u></b>	<b><u>Aq. Sol'n</u></b>	<b><u>Plastic Syringe</u></b>
<b>Boiling Pt. °C</b>	99	82.4	78	110	100
<b>Vapor Pressure mm Hg @ 21°C</b>	41	32	44	18	18
<b>Solubility in Water</b>	<0.1%	miscible	miscible	complete	miscible
<b>Specific Gravity</b>	0.69	0.79	0.79	1.15	1.05
<b>Percent Volatile</b>	100	99	99	none	none
<b>Evaporation Rate Butyl Acetate =1</b>	N/A	1.4	2.7	N/A	N/A
<b>Appearance</b>	colorless	colorless	red-orange	colorless	colorless
<b>Odor</b>	faint	mild	pleasant	none	none

N/A = Not Available

## **SECTION 10 — REACTIVITY DATA**

**Chemical Stability** All components are stable under recommended storage conditions.

**Conditions to Avoid** Keep from strong oxidizers.

**Hazardous Decomposition Productions** Solutions are stable.

**Hazardous Polymerization** Will not occur.

## **SECTION 11 — TOXICOLOGICAL INFORMATION**

### **Carcinogenicity**

NTP: No IARC: No Z List: No OSHA Reg: No

### **Toxicity Data**

<b><u>Component</u></b>	<b><u>Contents</u></b>	<b><u>TLV/(PEL)</u></b>
<i>Ampule 1 (white-dot)</i>	Isooctane	N/A
<i>Ampule 2 (black-dot)</i>	[Hydrochloric Acid] in Isopropanol	[5 ppm/(5 ppm)] 980 mg/m <sup>3</sup> /(980 mg/m <sup>3</sup> )
<i>Ampule 3</i>	Ethanol	1900 mg/m <sup>3</sup> /(1900 mg/m <sup>3</sup> )
<i>Aqueous Sol'n</i>	[Sodium Chloride] in water	[N/A]
<i>Plastic Syringe</i>	[Sodium Hydroxide] in water	[2 mg/m <sup>3</sup> /(2 mg/m <sup>3</sup> )]

## **SECTION 12 — ECOLOGICAL INFORMATION**

**Ethanol:** Ecotoxicity: Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C Fish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified) Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.

**Isopropanol:** Ecotoxicity: Fish: Fathead Minnow: >1000 ppm; 96h; LC50 Daphnia: >1000 ppm; 96h; LC50 Fish: Gold orfe: 8970-9280 ppm; 48h; LC50 IPA has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge.

## **SECTION 13 — DISPOSAL CONSIDERATIONS**

### ***Test Tube 1***

Contains reacted oil sample and solvent. Dispose of as an organic waste in accordance with all applicable federal, state and local environmental regulations.

### ***Test Tube 2***

Contains aqueous solutions and excess sodium hydroxide. Dispose of as a basic solution in accordance with all applicable federal, state and local environmental regulations.

## **SECTION 14 — TRANSPORTATION INFORMATION**

### **DOT**

**Proper Shipping Name:** None  
**Non-Hazardous for Transport:** As originally packaged by Dexsil Corporation, packaging conforms to conditions and limitations specified in 49 CFR 173.4b De minimis Exceptions.

### **IATA**

**Proper Shipping Name:** Outer packages limited to 40 kits are classified as De Minimis

### **IATA**

**Proper Shipping Name:** Dangerous Goods in Excepted Quantities  
**IATA UN Numbers:** 1219, 1987, 1262  
**Hazard Class:** 3  
**Packing Group:** II

## **SECTION 15 — REGULATORY INFORMATION**

### **United States Regulatory Information**

**SARA Listed:** Ethanol/methanol is identified on SARA Sec. 313.  
**TSCA Inventory Items:** Ethanol/methanol.  
**CERCLA Listed:** Ethanol/ methanol.  
**EINECS:** Components of this product are on the European Inventory of Existing Commercial Chemical Substances.

## **SECTION 16 — OTHER INFORMATION**

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.  
H314 Causes severe skin burns and eye damage.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness and dizziness.

The information in this Material Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and danger of these chemicals for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. These chemicals may interact with other substances. Since the potential uses are so varied, Dexsil cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Dexsil warrants that the chemicals meet the specifications set forth on the label.

DEXSIL DISCLAIMS ANY OTHER WARRANTIES; EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, IT'S MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Dexsil will periodically revise this Material Safety Data Sheet. CHEMTREC emergency telephone number is to be used ONLY in the event of CHEMICAL EMERGENCIES involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to the Customer Service Dept. at 1-203-288-3509.

*For additional information, contact Dexsil.*

**Date Prepared:** 09-13-2021 Revision 11