

# Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by  
Regulation (EU) No 830/2015

Revision 2, Replaces Rev. 1

Revised: March 2019

## TITRA-LUBE TBN TEST KIT

### SECTION 1: Identification of the substance/mixture and the company/undertaking

#### 1.1. Product identifier

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

This product is a mixture. For identification of the individual components, see section 3.

#### 1.2. Relevant identified uses of the substance or mixture and uses against

This product contains prepackaged reagents for the determination of Total Base Number (TBN) in industrial and lubricating oils.

#### 1.3. Details of the supplier of the safety data sheet

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

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

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

**Importer:** ETI Umwelttechnik AG  
Kalchbuhlstrasse 18  
7007 Chur, Switzerland

**Telephone Number:** (081) 253 54 54

**Email:** [info@eti-swiss.com](mailto:info@eti-swiss.com)

#### 1.4. Emergency telephone number

USA (800) 424-9300 (CHEMTREC) SWITZERLAND (435) 08 20 11

### Section 2: Hazards Identification

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

<b>Ampule 1 (white dot): Isooctane</b>			
Flammable liquid 3;H225	Highly flammable liquid and vapor.	Narcotic effects 3;H336	May cause drowsiness or dizziness.
Aspiration hazard 1;H304	May be fatal if swallowed and enters airways.	Aquatic chronic 2;H410	Very toxic to aquatic life with long lasting effects.
Skin irritant 2;H315	causes skin irritation.		

<b>Ampule 2 (black dot): Hydrochloric acid in isopropanol</b>			
Flammable liquid 3;H225	Highly flammable liquid and vapor.	Eye irritant 2;H319	Causes serious eye irritation.
Corrosive 1;H290	May be corrosive to metals.	Narcotic effects 3;H336	May cause drowsiness or dizziness.

<b>Ampule 3 (reddish orange): Ethanol</b>			
Flammable liquid 2;H225	Highly flammable liquid and vapor.	Eye Irritant 2;H319	Causes serious eye irritation.

<b>Aqueous solution: Sodium chloride in water</b>			
No applicable GHS categories.			

<b>Plastic syringe: Sodium hydroxide in water</b>			
No applicable GHS categories.			

#### 2.2. Label elements

**Ampule 1 (white dot): Isooctane**



**Danger**

- H225 Highly flammable liquid and vapor.
- H304 May be fatal if swallowed and enters airways
- H315 Causes skin irritation.
- H336 May cause drowsiness and dizziness.
- H410 Very toxic to aquatic life with long lasting effects.

**[Prevention]:**

- P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical / ventilating / light / equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.

- P273 Avoid release to the environment.
- P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

- P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
- P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment (see information on this label).
- P332+313 If skin irritation occurs: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.
- P391 Collect spillage.

**[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.
- H290 May be corrosive to metals.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness and dizziness.

**[Prevention]:**

- P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
- P233 Keep container tightly closed.
- P234 Keep only in original container.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical / ventilating / light / equipment.
- P242 Use non-sparking tools.
- P243 Take precautionary measures against static discharge.
- 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]:**

- P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rise skin with water/shower.
- P304+340+312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
- P337+313 If eye irritation persists: Get medical advice / attention.
- 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.
- P403+235 Store in a well-ventilated place
- P405 Store locked up.

**[Disposal]:**

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

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**Ampule 3 (reddish orange): Ethanol**



**Danger**

- H225 Highly flammable liquid and vapor.
- H319 Causes serious eye irritation.

**[Prevention]:**

- P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical / ventilating / light / equipment.
- P242 Use non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash skin thoroughly after handling.

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.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present.: Get medical advice/attention.

P337+313 If eye irritation persists: Get medical advice/attention.

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.

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**Aqueous Solution: Sodium Chloride in water**

No applicable GHS categories.

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**Plastic Syringe: Sodium hydroxide in water**

No applicable GHS categories.

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

**2.3. Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1% or higher.

**Section 3: Composition/information on ingredients**

**3.2. Mixtures**

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#	% liquid
Ampule 1 (white-dot)	Isooctane <sup>1</sup>	540-84-1	208-759-1	6.62%
Ampule 2 (black-dot)	Hydrochloric Acid <sup>1</sup>	7647-01-0	231-595-7	0.03%
	in Isopropanol	67-63-0	200-661-7	5.74%
Ampule 3	Ethanol <sup>1</sup>	64-17-5	200-578-6	3.10%
Aqueous Solution	Sodium Chloride	7647-14-5	231-598-3	14.99%
	in Water	7732-18-5	231-791-2	59.96%
Plastic Syringe	Sodium Hydroxide	1310-73-2	215-185-5	0.03%
	in Water	7732-18-5	231-791-2	9.53%
				100.00%

<sup>1</sup>A REACH registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**Section 4: First aid measures**

**4.1. Description of 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.

**4.2. Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### 4.3. Indication of any immediate medical attention and special treatment needed

No data available.

### **Section 5: Firefighting measures**

#### 5.1. Extinguishing media

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

**Special Fire Fighting Procedures** NONE.

#### 5.2. Special hazards arising from the substance or mixture

No data available

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4. Further information

No data available

### **Section 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment incl., chemical safety glasses and rubber gloves. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations.

#### 6.2. Environmental precautions

Keep out of drains and surface water.

#### 6.3. Methods for material containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

#### 6.4 Reference to other sections

For disposal see section 13.

### **Section 7: Handling and storage**

#### 7.1. Precautions for safe handling

Wear appropriate safety equipment when performing the test on site.

#### 7.2. Conditions for safe storage, including any incompatibilities

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

#### 7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

### **Section 8: Exposure controls/personal protection**

#### 8.1. Control parameters

**Components with work place control parameters**

Component	MAK	TWA	STEL
Isopropyl alcohol	200 ppm; 500 mg/m <sup>3</sup>	400 ppm; 999 mg/m <sup>3</sup>	400 ppm; 1000 mg/m <sup>3</sup>
Isooctane	200 ppm; 2400 mg/m <sup>3</sup> (Octane)	500 ppm; 2350 mg/m <sup>3</sup> (Octane).	375 ppm; 1800 mg/m <sup>3</sup>
Ethanol	500 ppm; 960 mg/m <sup>3</sup>	1000 ppm; 1900 mg/m <sup>3</sup>	1000 ppm
Hydrochloric acid	3.0 mg/m <sup>3</sup>	5 ppm (8 hr); 8 mg/m <sup>3</sup> (8 hr)	10 ppm 15 min; 15 mg/m <sup>3</sup> 15 min

#### 8.2. Exposure controls

##### **Engineering Controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the work day.

##### **Personal Protective Equipment (PPE)**

<b>Respiratory protection</b>	None required during normal use.
<b>Ventilation</b>	Perform test only in a well-ventilated area.
<b>Protective gloves</b>	Always wear rubber gloves when performing the test.
<b>Eye protection</b>	Wear safety glasses.
<b>General Hygiene Measures</b>	Avoid contact with skin, eyes and clothing. Wash after running tests.

## **Section 9: Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties**

<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: Stability and reactivity**

### **10.1. Reactivity**

No data available

### **10.2. Chemical stability**

All components are stable under recommended storage conditions.

### **10.3. Possibility of hazardous reactions**

Solutions are stable.

### **10.4. Conditions to avoid**

Heat, flames, and sparks. Keep from strong oxidizers.

### **10.5. Incompatible materials**

Oxidizing agents

### **10.6. Hazardous decomposition products**

No data available.

## **Section 11: Toxicological information**

### **11.1. Information on toxicological effects**

#### **Acute toxicity**

Ampule 1 (Isooctane): LD50 Oral - Rat - > 5.000 mg/kg (OECD Test Guideline 401)  
 LC50 Inhalation - Rat - 4 h - > 33,52 mg/l (OECD Test Guideline 403)  
 LD50 Dermal - Rabbit - > 2.000 mg/kg (OECD Test Guideline 402)

Ampule 2 (Isopropanol): LD50 Oral - Rat - 5.045 mg/kg  
 LC50 Inhalation - Rat - 8 h - 16000 ppm  
 LD50 Dermal - Rabbit - 12.800 mg/kg

Ampule 3 (Ethanol): Oral Rat LD50:7060 mg/kg  
 Rat LC50 Inhalation:124700 mg/m3/4H

#### **Skin corrosion/irritation**

No data available.

**Serious eye damage/eye irritation**

No data available.

**Respiratory or skin sensitisation**

No data available.

**Germ cell mutagenicity**

No data available.

**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

Ampule 3 (Ethanol) - Reproductive toxicity - Human - female - Oral  
Effects on Newborn: Apgar score (human only).  
Effects on Newborn: Other neonatal measures or effects.  
Effects on Newborn: Drug dependence.

**Specific target organ toxicity - single exposure**

Ampule 1 (Isooctane) – May cause drowsiness or dizziness  
Ampule 2 (Isopropanol) – Narcotic effects  
Ampule 3 (Ethanol) - No data available.

**Specific target organ toxicity - repeated exposure**

No data available.

**Aspiration hazard**

No data available.

**Additional information**

None

**Section 12: Ecological information****12.1. Toxicity**

**Ampule 2 (Isopropanol):** Ecotoxicity: Fish: Fathead Minnow: >1000 ppm; 96h; LC50Daphnia: >1000 ppm; 96h; LC50Fish: Gold orfe: 8970-9280 ppm; 48h; LC50IPA 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.

**Ampule 3 (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.

**Plastic Syringe (Potassium Hydroxide) :** Ecotoxicity in water (LC50): 80 mg/l 24 hours [Mosquito Fish].

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1% or higher.

**12.6. Other adverse effects**

Ampule 1 (Isooctane) – Very toxic to aquatic life with long lasting effects.

**Section 13: Disposal considerations**



**Fifth Ordinance on the federal Act about Work** (Occupational Safety For The Youth) ArGV 5 of 28 September 2007 (Status as of 1 August 2014) SR 822.115.2

**Ordinance from the department of Economy, Education and Research on dangerous and difficult chores during pregnancy and maternity** (Maternity Protection Ordinance) of 20 March 2001 (Status as of 1 January 2013) SR 822.111.52

**Ordinance from the department of Environment, Traffic, Energy and Communications about Lists on the traffic of waste** of 18 October 2005 (Status as of 1 January 2010) SR 814.610.1

**Federal Act on Work in Industry, Trade and Commerce** (Federal Act on Work) of 13 March 1964 (Status as of 1 December 2013)

## **15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out

## **Section 16: Other information**

The information in this Safety Data Sheet meets the requirements of Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No 830/2015. 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 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.

*For additional information, contact Dexsil.*