

# Material Safety Data Sheet

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

## PETROFLAG 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) 527-3887

**Date Prepared:** 12-04-2014

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

**Date Reviewed:** 12-04-2014

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

**Product Description:** The PetroFLAG product line is an On-Site test kit for quantifying petroleum hydrocarbons in soil.

### SECTION 2 – HAZARDS IDENTIFICATION

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

##### **Ampule 1 (Extract Solvent \ Methanol Solution)**

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

Acute Tox. 3;H301 Toxic if swallowed.

Acute Tox. 3;H311 Toxic in contact with skin.

Acute Tox. 3;H331 Toxic if inhaled.

STOT SE 1;H370 Causes damage to organs. Specific Target Organs: (Not Available)

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##### **Ampule 2 (Calibration Standard\Methanol Solution )**

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

Acute Tox. 3;H301 Toxic if swallowed.

Acute Tox. 3;H311 Toxic in contact with skin.

Acute Tox. 3;H331 Toxic if inhaled.

STOT SE 1;H370 Causes damage to organs. Specific Target Organs: (Not Available)

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##### **Ampule 3 (Screw-top Vial\5% NaCl Solution)**

No applicable GHS categories.

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##### **Ampule 4 (High Range Solvent\Diglyme)**

Repr. 1B;H360FD May damage fertility. May damage the unborn child.

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## 2.2. Label elements

### Ampule 1 (Extract Solvent \ Methanol Solution)



**Danger**

H225 Highly flammable liquid and vapor.  
H301 Toxic if swallowed.  
H311 Toxic in contact with skin.  
H331 Toxic if inhaled.  
H370 Causes damage to organs.

#### **[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.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves / eye protection / face protection.

#### **[Response]:**

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.  
P302+352 IF ON SKIN: Wash with plenty of soap and water.

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.

P307+311 IF exposed: Call a POISON CENTER or doctor / physician.

P321 Specific treatment (see information on this label).

P330 Rinse mouth.

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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#### **[Prevention]:**

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P241 Use explosion-proof electrical / ventilating / light / equipment.  
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves / eye protection / face protection.

#### **[Response]:**

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.  
P302+352 IF ON SKIN: Wash with plenty of soap and water.  
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.

P307+311 IF exposed: Call a POISON CENTER or doctor / physician.

P321 Specific treatment (see information on this label).

P330 Rinse mouth.

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.

**Ampule 3 (Screw-top Vial\5% NaCl Solution)**  
No applicable GHS categories.

**Ampule 4 (High Range Solvent\Diglyme)**



**Danger**

H226 Flammable liquid and vapor.  
H360FD\* May damage fertility. May damage the unborn child.

**[Prevention]:**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
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.  
P308+313 IF exposed or concerned: 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.  
P405 Store locked up.

**[Disposal]:**

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

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

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

The PetroFLAG Test Reagent Kit consists of two break-top ampules (extraction solvent and calibration solvent) and a screw top vial. Screw top vial contents are non-hazardous. The PetroFLAG High Range Reagents consist of one break-top ampule.

Component	Contents	CAS#	EC#	GHS Classification	% liquid
Ampule 1 Extract Solvent	Methanol Solution	67-56-1	200-659-6	Flam. Liq. 2;H225 Acute Tox. 3;H331 Acute Tox. 3;H311 Acute Tox. 3;H301 STOT SE 1;H370	62.00%
Ampule 2 Calibration Standard	Methanol Solution	67-56-1	200-659-6	Flam. Liq. 2;H225 Acute Tox. 3;H331 Acute Tox. 3;H311 Acute Tox. 3;H301 STOT SE 1;H370	6.00%
Screw-top Vial	5% NaCl Solution	7647-14-5	231-598-3		32.00%
					100.00%
Ampule 1 High Range Solvent	Diglyme	111-96-6	203-924-4	Flam. Liq. 3;H226 Repr. 1B;H360FD	100.00%

### **SECTION 4 – FIRST AID MEASURES**

**First Aid**

In case of contact with reagents, rinse well with water. If swallowed, induce vomiting immediately by giving two glasses of water and sticking fingers down throat.

**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. Seek medical attention.

**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>	<i>Ampule 1 &amp; Ampule 2</i>	50°F
	Screw-top Vial	N/A
	High Range <i>Ampule</i>	135°F
<b>Flammable Limit</b>	<i>Ampule 1 &amp; Ampule 2</i>	Unknown
	Screw-top Vial	N/A
	High Range <i>Ampule</i>	Upper: 17.4    Lower: 1.5
<b>Extinguishing Media</b>	<i>Ampule 1 &amp; Ampule 2</i>	Dry chemical, CO <sub>2</sub>
	Screw-top Vial	None
	High Range <i>Ampule</i>	Dry powder, water fog, CO <sub>2</sub> .
<b>Special Fire Fighting Procedures</b>	<i>Ampule 1 &amp; Ampule 2</i>	None
	Screw-top Vial	None
	High Range <i>Ampule</i>	Wear SCBA and protective clothing.

## **SECTION 6 — ACCIDENTAL RELEASE MEASURES**

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

**Spills and Leaks**        *Ampule 1 & Ampule 2 - Methanol Solution*  
Solvent absorbent recommended for spills.    Flush area with water.

*High Range Ampule - Diglyme*  
Solvent absorbent recommended for spills.    Place material into a disposal container.

## **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 where adequate ventilation conditions exist.    If airborne concentration is high, use a chemical cartridge respirator.

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

**Protective gloves**                        Always wear rubber gloves when performing the PETROFLAG 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><u>Property</u></b>	<b><u>Ampule 1</u></b>	<b><u>Ampule 2</u></b>	<b><u>Screw-top Vial</u></b>	<b><u>High Range Ampule</u></b>
Boiling Pt. °C	64.5	64.5	N/A	162
Vapor Pressure mm Hg @ 21°C	97	97	N/A	1.7
Solubility in Water	miscible	Miscible	complete	100%
Specific Gravity	0.79	0.79	1.01	0.95
Percent Volatile	99.9	99.9	N/A	100
Evaporation Rate Butyl Acetate =1	5.9	5.9	N/A	0.36
Appearance	clear	clear	clear	clear
Odor	pleasant	pleasant	none	ether-like

N/A = not available

## **SECTION 10 – REACTIVITY DATA**

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

**Conditions to Avoid** *Ampule 1 and Ampule 2:* Excessive Heat  
High Range Ampule: Avoid strong oxidizers. May form peroxides on exposure to air.

**Hazardous Decomposition Productions** *Ampule 1 and Ampule 2:* Solutions are stable  
High Range Ampule: None Expected.

**Hazardous Polymerization** Will not occur.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Carcinogenicity**

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

Diglyme may cause teratogenic or mutagenic effects and cause harm to the unborn child.

### **Toxicity Data**

<b><u>Component</u></b>	<b><u>Contents</u></b>	<b><u>TLV/(PEL)</u></b>
<i>Ampule 1</i> "Extraction Solvent"	Methanol Sol'n	200 ppm/(200 ppm)
<i>Ampule 2</i> "Calibration Standard"	Methanol Sol'n	200 ppm/(200 ppm)
Screw-top Vial	5% NaCl Sol'n	N/A
<i>Ampule 1</i> "High Range"	Diglyme	5 ppm

## **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.

**Methanol:** Ecotoxicity in water (LC50): 29400 mg/l 96 hours [Fathead Minnow].

## **SECTION 13 — DISPOSAL CONSIDERATIONS**

Used reagents contain oil and solvent. Dispose of as an organic waste in accordance with all applicable federal, state and local environmental regulations.

## **SECTION 14 — TRANSPORTATION INFORMATION**

**DOT**  
**Proper Shipping Name:** Methanol Solution  
**Limited Quantities:** As originally packaged by Dexsil Corporation, packages are shipped under Limited Quantities under 49 CFR 173.150, Exceptions for Class 3 (flammable) liquids.

**IATA**  
**Proper Shipping Name:** Dangerous Goods in Excepted Quantities  
**IATA UN Number:** 1230, 1170  
**Hazard Class:** 3 (6.1)  
**Packing Group:** II

## **SECTION 15 — REGULATORY INFORMATION**

**SARA Listed:** Ethanol/methanol and diglyme are identified on SARA Sec. 313.

**TSCA Inventory Items:** Ethanol/methanol and diglyme.

**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.  
H226 Flammable liquid and vapor.  
H301 Toxic if swallowed.  
H311 Toxic in contact with skin.  
H331 Toxic if inhaled.  
H360FD May damage fertility. Suspected of damaging the unborn child  
H370 Causes damage to organs.

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.*

*Revision 8*