

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

PETROFLAG HIGH RANGE AMPULE

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

1.1. Product identifier

Product Description: The PetroFLAG High Range Ampule is pre-packaged for use with standard PetroFLAG reagents as an On-Site test kit for quantifying high levels of petroleum hydrocarbons in soil.

This product is a sealed ampule of: Diethylene glycol dimethyl ether
Index Number: 603-139-00-0
Reach Number: 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.
CAS Number: 11-96-6

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

This product contains prepackaged reagents for the analysis of soil for petroleum hydrocarbon contamination.

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

Importer: ETI Umwelttechnik AG
Kalchbuhlstrasse 18
7007 Chur, Switzerland

Telephone Number: (081) 253 54 54
Email: 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

Classification according to Regulation (EC) No 127/2008

Flammable liquids (Category 3), H226 - Flammable liquid and vapour.
Reproductive toxicity (category 1B), H360 - May damage fertility or the unborn child.

2.2. Label elements

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.

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. Substances

The PetroFLAG High Range Reagents consist of diglyme in a break-top ampule.

Synonyms : 2-Methoxyethyl ether'Diglyme'DimethyldiglycolBis(2-methoxyethyl) ether
Formula : C6H14O3
Molecular weight : 134,17 g/mol
CAS-No. : 111-96-6
EC-No. : 203-924-4
Index-No. : 603-139-00-0

Component	EC#	GHS Classification	% liquid
Bis(2-methoxyethyl)ether Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS#	111-96-6	203-924-4	100.00%
		Flam. Liq. 3;H226 Repr. 1B;H360FD	

Section 4: First aid measures

4.1. Description of first aid measures

First Aid

In case of contact with reagents, rinse well with water.

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.

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

Acute

Poison. May be fatal if swallowed. If swallowed there is a risk of blindness. Toxic if swallowed, in contact with skin or if inhaled. Ingestion causes nausea, weakness and central nervous system effects, headache, vomiting, dizziness, symptoms of drunkenness. Coma and death due to respiratory failure may follow severe exposures: Medical treatment necessary. A latent period of several hours may occur between exposure and the onset of symptoms.

Delayed

Causes damage to organs through prolonged or repeated exposure.

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

Treat symptomatically and supportively. The severity of symptoms depends upon the length and concentration of the exposure. If ingested, get immediate medical attention.

Note to Physicians

Treat symptomatically. The severity of outcome following methanol ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested. Therefore, there is a need for rapid treatment of any ingestion exposure. Call a POISON CENTER. No data available.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide, regular dry powder, water spray, alcohol resistant foam, sand. Use water spray to cool fire fire-exposed containers. Water will not cool methanol below its flash point. Collect spillage.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

5.2 Special hazards arising from the substance or mixture

Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Containers may rupture or explode if exposed to heat. Dangerous gases may accumulate in confined spaces.

Combustion

Releases toxic gases, vapors. Carbon monoxide, carbon dioxide, formaldehyde.

5.3 Advice for firefighters

Cool containers with water spray until well after the fire is out.

Fire Fighting Measures

Do not allow run-off from fire-fighting to enter drains or water courses. Keep unnecessary people away, isolate hazard area and deny entry.

Protective Equipment and Precautions for Firefighters

Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.

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. Beware of vapors accumulating to form explosive concentrations.

6.2. Environmental precautions

Keep out of drains and surface water. Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

6.3. Methods for material containment and cleaning up

High Range Ampule - Diglyme

Solvent absorbent recommended for spills. Place material into a disposal container.

6.4 Reference to other sections

For disposal see section 13

Section 7: Handling and storage

7.1. Precautions for safe handling

Use in a well ventilated area. Wear personal protective clothing and equipment, see Section 8. Eliminate all sources of ignition. No smoking. Use good industrial hygiene practices. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and leaving work. Do not breathe vapor.

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

Component	MAK	BAT
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High Range Ampule - Diglyme

Derived No Effect Level (DNEL)

Application Area	Exposure routes	Health effect	Value
Workers	Inhalation	Long-term systemic effects	26,8 mg/m ³
Workers	Skin contact	Long-term systemic effects	2,08mg/kg BW/d
Consumers	Inhalation	Long-term systemic effects	6,67 mg/m ³
Consumers	Skin contact	Long-term systemic effects	1,04mg/kg BW/d
Consumers	Ingestion	Long-term systemic effects	1,04mg/kg BW/d

Predicted No Effect Concentration (PNEC)

Compartment	Value
Water	9,43 mg/l
Soil	1,72 mg/kg
Marine water	0,64 mg/l
Fresh water	6,4 mg/l
Marine sediment	2,74 mg/kg
Fresh water sediment	27,4 mg/kg
Onsite sewage treatment plant	50 mg/l

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)

Respiratory protection	None required during normal use.
Ventilation	Perform test only in a well-ventilated area. Avoid breathing vapors.
Protective gloves	Always wear rubber gloves when performing the test.
Eye protection	Wear safety glasses.
General Hygiene Measures	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**

<u>Property</u>	<u>High Range Ampule</u>
Boiling Pt. °C	162
Vapor Pressure mm Hg @ 21°C	1.7
Solubility in Water	100%
Specific Gravity	0.95
Percent Volatile	100
Evaporation Rate Butyl Acetate =1	0.36
Appearance	clear
Odor	ether-like

N/A = not available

Section 10: Stability and reactivity**10.1. Reactivity**

No dangerous reactions known under conditions of normal use.

10.2. Chemical stability

All components are stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Will not polymerize.

10.4. Conditions to avoid

Heat, sparks, open flame.

10.5. Incompatible materials

Strong oxidizing agents and strong inorganic acids.

10.6. Hazardous decomposition products

Combustion will generate carbon dioxide and possibly carbon monoxide. Diglyme may form peroxides on exposure to air. Other solutions are stable.

Section 11: Toxicological information

11.1. Information on toxicological effects

High Range Ampule – Diglyme

Acute Toxicity: Oral LD50 Rat 5.400 mg/kg

Remarks: Behavioral: Somnolence (general depressed activity). Behavioral: Ataxia. Respiratory disorder

Corrosion/irritation

May cause irritation to eyes, skin and respiratory tract.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

High Range Ampule (Diglyme) - Laboratory experiments have shown teratogenic effects.

Presumed human reproductive toxicant

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Section 12: Ecological information

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Methanol and ethanol - mobile.

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

No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Used reagents contain oil and solvent. Dispose of as an organic waste in accordance with all applicable federal, state
PetroFLAG High Range Ampule – EU

and local environmental regulations.

Section 14: Transportation information

14.1. UN number

ADR, RID, ICAO, IATA, ADN, IMDG: UN3271

14.2. UN proper shipping name

ADR, RID, ICAO, IATA, ADN, IMDG: ETHERS, N.O.S. (Bis(2-methoxyethyl)ether))

IATA

When shipped as originally packaged may be shipped as: Dangerous Goods in Excepted Quantities

IATA UN Number: 3271

Hazard Class: 3

Packing Group: III

14.3. UN transport hazard class(es):

ADR, RID, ICAO, IATA, ADN, IMDG: 3

14.4. Packing group:

ADR, RID, ICAO, IATA, ADN, IMDG: III

14.5. Environmental hazards:

ADR, RID, ICAO, IATA, ADN, IMDG: No

14.6. Special precautions for user:

ADR, RID, ICAO, IATA, ADN, IMDG: None

14.7. Transport in Bulk According to Annex II of MARPOL and the IBC Code:

ADR, RID, ICAO, IATA, ADN, IMDG: Not relevant

14.8. Additional information:

ADR, RID, ICAO, IATA, ADN, IMDG: Not relevant

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

This SDS complies with the requirements of Regulation (EC) No. 1907/2006

Authorizations and/or restrictions on use

High Range Ampule (Diglyme):

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

Bis(2-methoxyethyl)ether

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Bis(2-methoxyethyl)ether

This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006. Listed substance / Sunset Date: Bis(2-methoxyethyl)ether / 22.08.2017

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

EINECS: Components of this product are on the European Inventory of Existing Commercial Chemical Substances.

Swiss Regulatory Information:

Federal Act on Protection against Dangerous Substances and Preparations (Chemicals Act, ChemA) of 15 December 2000 (Status as of 13 June 2006) SR 813.1

Ordinance on Protection against Dangerous Substances and Preparations (Chemicals Ordinance, ChemO) of 18 May 2005 (Status as of 15 July 2014) 813.11

Ordinance on the Reduction of Risks relating to the Use of Certain Particularly Dangerous Substances, Preparations and Articles (Chemical Risk Reduction Ordinance, ORRChem) of 18 May 2005 (Status as of 1 January 2014) SR 814.81

Federal Act on the Protection of the Environment (Environmental Protection Act, EPA) of 7 October 1983 (Status as of 1 July 2014) 814.01

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)

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.