Safety Data Sheet

Revision Date: **6/30/2014**

SDS #: **10121**

TMB Stop Solution

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:	**Product Code**
TMB Stop Solution	37-01-20
	50-85-06
	50-85-05
	50-85-04

Hazardous Reagent
TMB Stop Solution

Hazardous Reagent Product code
Catalog No. listed above

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755
Fax #: 1-301-948-0169
Web: www.kpl.com
Email: kplmsds@seracare.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1) 800 424 8802	Hours: 24 hours/day, 7 days/week

CHEMTREC: CHEMTREC Customer Number:- CCN12505*
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 CCN12505 or
+1 703-527-3887 (collect calls accepted)

2. HAZARD IDENTIFICATION

Hazard Type Health Hazard: Data for 100% Diethylene Glycol: Harmful if swallowed, Causes damage to kidneys if swallowed, May cause drowsiness or dizziness

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Classification Acute Tox. 4

Hazard Statement H302 : Harmful if swallowed.

Precautionary Statement P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.

Symbols of Danger GHS07: Warning

Data for 100% Hazardous Chemical

ROUTES OF EXPOSURE:	The substance can be absorbed into the body by ingestion.
INHALATION RISK:	A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster.
SHORT-TERM EXPOSURE	The substance may cause effects on the kidneys , resulting in kidney impairment The substance may cause effects on the central nervous system and liver by ingestion . Exposure by ingestion may result in death.
LONG-TERM EXPOSURE:	Not Available

The product is a Mixture. It May Cause the following symptoms.

INGESTION: Abdominal pain. Nausea. Vomiting. Diarrhoea. Dizziness. Drowsiness. Confusion. Unconsciousness.

Eye Exposure: Direct contact with product may result in eye irritation.

Skin Exposure: Absorption through skin may occur. May cause irritation to the skin

Inhalation Exposure: May cause irritation to the respiratory tract.

Ingestion Exposure: May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CHEMICAL	% Weight	CAS #:
TMB Stop Solution	Diethylene Glycol	≤ 3%	111-46-6

Classification Acute Tox. 4

4. FIRST AID MEASURES

Data for 100% Hazardous Chemical

Ingestion First Aid:	Give one or two glasses of water to drink. Refer immediately for medical attention. See Notes. 007
Inhalation First Aid:	Fresh air, rest.
Skin First Aid:	Rinse skin with plenty of water or shower.
Eye First Aid:	Rinse with plenty of water (remove contact lenses if easily possible).

5. FIRE FIGHTING MEASURES

Data For 100% Hazardous Chemical

Fire Acute Hazard:	Fire Prevention:	Fire Fighting:
Combustible.	NO open flames.	Powder, alcohol-resistant foam, water spray, carbon dioxide .

Explosion Acute Hazard:		
Not Available	Not Available	Not Available

CHEMICAL DANGERS: Reacts violently with strong oxidants causing fire and explosion hazard. Attacks some forms of plastic.

PHYSICAL DANGERS: Not Available

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Should not be released into the environment.
Method of Containment	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
Methods of Clean-up	Wash away spilled liquid with plenty of water.
Other Information	Data for 100% Diethylene Glycol: Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.

Data for 100% Hazardous Chemical

SPILLAGE DISPOSAL	Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Collect leaking liquid in sealable containers. Wash away spilled liquid with plenty of water.

7. HANDLING AND STORAGE

Handling:	Handle in accordance with good industrial hygiene and safety practice.
Storage:	Store at room temperature. Data for 100% Diethylene Glycol: Dry. Well closed. Separated from strong oxidants.

Data for 100% Hazardous Chemical

STORAGE	Dry. Well closed. Separated from strong oxidants.

8. EXPOSURE CONTROL

Data for 100% Hazardous Chemical

•INHALATION	Ventilation.
•EYES	Safety spectacles.
•SKIN	Protective gloves.
•INGESTION	Do not eat, drink, or smoke during work.

Engineering Controls Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment:
Eye/face protection -
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection -
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Full contact Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)
Splash contact Material: Nitrile rubber
Minimum layer thickness: 0.11 mm

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless solution		
Physical State	Liquid	**pH:**	0.5 - 1.0

Data for 100% Hazardous Chemical

Boiling point: 244 °C	Melting point: -6.5°C	Relative density (water = 1): 1.12 Temperature: 20 °C	Solubility in water: miscible	Vapour pressure, Pa at 20°C: 2.7	pH-VALUE: 6 - 8 Temperature: 20 °C Concentration: 200 g/l
Relative vapour density (air = 1): 3.7	Flash point: 124°C c.c.	Auto-ignition temperature: 229°C	Explosive limits, vol% in air: 1.6-10.8	Octanol/water partition coefficient as log Pow: -1.47	

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions

Incompatibility Materials to Avoid Strong oxidants.

Hazardous Decomposition Products Upon evaporation of water, toxic gases and vapors may be released if involved in a fire.

Hazardous Polymerization Will not occur

Data for 100% Hazardous Chemical

CHEMICAL DANGERS: Reacts violently with strong oxidants causing fire and explosion hazard. Attacks some forms of plastic.

PHYSICAL DANGERS: Not Available

11. TOXICOLOGY MEASURES

Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral LD50 oral rat: 12600 mg/kg
Reference: Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 25, 1974.

LD50 Dermal LD50 dermal rat/rabbit: 11900 mg/kg
Species: Rabbit
Reference: Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 25, 1974.

LC50 Inhalation LC50 Fish (96 hours)
Minimum: 75200 mg/l
Maximum: 75200 mg/l
Median: 75200 mg/l
Study number: 1
Reference: Geiger, D.L., L.T. Brooke, and D.J. Call 1990. Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Volume 5. Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI :332 p.

Chronic Toxicity

Carcinogenicity Not Applicable

Irritation Data for 100% Diethylene Glycol: Eyes - rabbit | Result: No eye irritation

Corrosivity Data for 100% Diethylene Glycol: Skin - rabbit | Result: No skin irritation (OECD Test Guideline 404)

Sensitization Data for 100% Diethylene Glycol: Maximisation Test - guinea pig | Result: Did not cause sensitisation on lab

Neurological Effects Not Available

Mutagenic Effects Not Available

Reproductive Effects Not Available

Developmental Effects Not Available

Target Organ Effects Data for 100% Diethylene Glycol: Kidneys, Central Nervous System and Liver

Other adverse effects Not Available

12. ECOLOGICAL MEASURES

Ecotoxicity

Data for 100% 2,2' -oxybisethanol diethylene glycol : Aquatic Toxicity: > 32,000 ppm/96 hr/mosquito fish/TLm/ fresh water
Waterfowl Toxicity: Currently not available
Biological Oxygen Demand (BOD): 6%, 5 days

Persistence/Degradability

Data for 100% 2,2' -oxybisethanol diethylene glycol : Readily Biodegradable

Mobility in Environmental Media

Data for 100% 2,2' -oxybisethanol diethylene glycol : Using a structure estimation method based on molecular connectivity indices(1), the Koc of diethylene glycol can be estimated to be 1(SRC). According to a classification scheme(2), this estimated Koc value suggests that diethylene glycol is expected to have very high mobility in soil. [(1) Meylan WM et al; Environ Sci Technol 26: 1560-67 (1992) (2) Swann RL et al; Res Rev 85: 17-28 (1983)] **PEER REVIEWED**

Bioaccumulation/ Accumulation

Data for 100% 2,2' -oxybisethanol diethylene glycol : An estimated BCF of 3 was calculated in fish for diethylene glycol(SRC), using an estimated log Kow of -1.5(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).
[(1) Meylan WM, Howard PH; J Pharm Sci 84: 83-92 (1995) (2) Meylan WM et al; Environ Toxicol Chem 18: 664-72 (1999) (3) Franke C et al; Chemosphere 29: 1501-14 (1994)] **PEER REVIEWED**

13. DISPOSAL MEASURES

Waste Disposal Method:

Observe all Federal, State and Local laws concerning health and pollution. Data for 100% 2,2' -oxybisethanol diethylene glycol : Collection of small amounts of substance: Place in a collection container for halogen-free organic solvents and solutions of halogen-free organic substances. Collection vessels must be clearly labelled with a systematic description of their contents and with the hazard symbol and the R and S phrases. Store the vessels in a well-ventilated location. Entrust them to the appropriate authorities for disposal.

Contaminated Packaging:

Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.

US EPA Waste Number:

EPA AEGL: Not listed

14. TRANSPORTATION MEASURES

DOT: Not Available

IATA: Not Available

ADR (road)/ RID (rail): Not Available

IMDG (sea): Not Available

General Transport Regulations

Data for 100% 2,2' -oxybisethanol
diethylene glycol : Grades of Purity: Regular grade;
polyester
grade
7.2 Storage Temperature: Ambient
Inert Atmosphere: No requirement
Venting: Open (flame arrester)
IMO Pollution Category: D
Ship Type: Data not avaialable
Barge Hull Type: Currently not available

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 (OSHA HCS).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)

This product contains no chemical or chemicals which are subject to the reporting requirements of the Clean Air Act, Section 112 HAPS

State Regulations

California Proposition 65:

This product contains the following Proposition 65 chemicals: None Listed

State Right to Know Act

Chemical Name	Diethylene Glycol
Massachusetts	Not Listed
New Jersey	Not Listed
Pennsylvania	Listed
New York	Not Listed
Rhode Island	Listed

International Inventories

Chemical Name	Diethylene Glycol
TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
CHINA	Listed
KECL	Listed
JAPAN:	Listed
AICS	Listed

EU Regulations

Annex I Index#	Data for 100% 2,2'-oxydiethanol: 603-140-00-6
Classification	Acute Tox. 4
Risk Phrases	H302 : Harmful if swallowed.
Safety Phrases	P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product.
Symbols and Indications of Danger	GHS07: Warning
Specific Concentration Limits	2,2' -oxybisethanol diethylene glycol: Not Available,
Export and Import	This substance is not listed in the Annex I of Regulation (EC) No 689/2008.
European Priority List	This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

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