



MATERIAL DATA SHEET

I. PRODUCT AND COMPANY INFORMATION

TRADE NAME: Liquid Bridge Plug (HT-Initiator)
 CHEMICAL FAMILY: Proprietary
 CAS No: 68479-98-1
 Date Prepared: 06-01-12

M&D Industries
 PO Box 80293
 Lafayette, LA 70598
 Main Phone: (337) 984-0471
 EMERGENCY CONTACT:
 Phone: (337) 984-0471

II. HAZARDOUS INGREDIENTS

<u>CHEMICAL NAME</u>	<u>COMMON NAME</u>	<u>EXPOSURE LIMIT</u>
Proprietary	N/A	N/A

III. PHYSICAUCHEMICAL CHARACTERISTICS

<u>APPEARANCE & ODOR</u>	<u>VAPOR DENSITY (AIR=1)</u>	<u>BOILING POINT</u>	<u>SOLUBILITY IN WATER</u>
Clear liquid, pungent odor	N/A	N/A	N/A

<u>SPECIFIC GRAVITY (H2O = 1)</u>	<u>EVAPORATION RATE (N-Butyl Acetate =1)</u>	<u>VAPOR PRESSURE (mmHg)</u>	<u>MELTING POINT</u>
N/A	N/A	N/A	N/A

Warning! Acute inhalation, chronic inhalation, acute skin, acute eye, acute ingestion, chronic ingestion.

IV. FIRE AND EXPLOSION DATA

<u>FLASH POINT</u>	<u>FLAMMABLE LIMITS</u>		<u>AUTO IGNITION TEMP</u>
	<u>Upper</u>	<u>Lower</u>	
135C/275F (TCC)	N/A	N/A	N/A

Extinguishing Method: Foam, carbon dioxide, dry chemical, or water.

Fire Fighting Procedures and Precautions: Avoid inhalation of smoke and vapors.

V. REACTIVITY DATA

<u>STABILITY</u>	<u>CONDITIONS TO AVOID</u>	<u>MATERIALS TO AVOID</u>	<u>HAZARDOUS POLYMERIZATION</u>
Stable	Exposure to air	Strong Oxidizers, Acids	Will not occur



VI. HEALTH HAZARD DATA

SKIN:	Harmful in contact with skin.
EYES:	Eye irritant.
INHALATION:	Due to low volatility of DETDA at room temperature, not expected to be an inhalation hazard.
INGESTION:	Harmful if swallowed.
CARCINOGENIC EFFECTS:	A two-year feeding study showed DETDA caused effects in the pancreas, liver, thyroid, and eyes of rats.
OTHER HEALTH EFFECTS:	DETDa has caused skin sensitization in humans in rare cases.

EMERGENCY AND FIRST AID PROCEDURES

SKIN:	Remove containment clothing. Thoroughly rinse skin with water for at least 15 minutes. Seek medical attention.
EYES:	Rinse immediately with plenty of water for at least 15 minutes. Seek medical attention.
INHALATION:	If inhaled, move to fresh air.
INGESTION:	Only induce vomiting if directed to do so by medical personnel. Give 2 glasses of water for dilution. Seek medical attention. Never give anything by mouth to an unconscious person.

VII. SPILL OR LEAK PROCEDURES

If spilled, contain with dikes or absorbent to prevent contamination of streams and sewers. A pump or vacuum can be used for larger spills, with absorbent applied to facilitate drying.

SPECIAL PRECAUTIONS: Avoid inhalation of smoke and vapors.

VIII. CONTROL MEASURES

RESPIRATORY PROTECTION;	A NIOSH-approved organic vapor respiratory mask may be used when there is potential for exposure to aerosol or heated material.
EXPOSURE CONTROL:	Not established by OSHA/ACGIH
PERSONAL PROTECTION:	Nitrile or neoprene gloves of at least 15 mil thickness should be used in industrial settings. When using with a pressurized system, chemical goggles and/or face shield should be utilized. When using product in a non-pressurized fashion, safety glasses with side shields can be used.
VENTILATION, Mechanical:	None
VENTILATION, Local:	None
VENTILATION, Special:	None
OTHER EQUIPMENT:	None
SPECIAL INSTRUCTIONS:	None



IX. HANDLING AND STORAGE

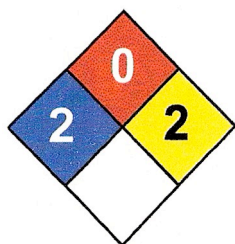
Handling:	In an industrial environment, neoprene or nitrile gloves of at least 15 mil thickness should be worn when handling this chemical. In a laboratory, N-Dex 4 mil or greater have been shown to be effective.
Storage:	Product should be stored in a cool, well ventilated, dry area. Product should be in a closed, nitrogen blanketed container when not in use.

X. TRANSPORTATION INFORMATION

Not Regulated

XI. LEGENDS

N/A = Not Applicable
 TLV = Threshold Limit Value
 UNK = Unknown at This Time



Health	2
Fire	0
Reactivity	1
Personal Protection	C

Material Safety Data Sheet

FOR INDUSTRIAL USE ONLY

Liquid Bridge Plug® Part B (HTA)

1. Product and company identification

Product name Liquid Bridge Plug® Part B (HTA)

Product Type Curing Agent

Importer / Supplier M&D Industries of Louisiana, Inc.
502 Richland Avenue, Lafayette, Louisiana 70508 USA
Email: donnie@ultrasealinc.com
Phone: + 1.337.984.0471 Fax: + 1.337.981.2131

Print date 01-JANUARY-2013

US HS Code: 2921.59.80.90

2. Hazards identification

Form Liquid

Odor Pungent

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview WARNING !
TOXIC IF INHALED OR SWALLOWED. HARMFUL IN CONTACT WITH SKIN. CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION.

Potential acute health effects

Inhalation Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Toxic if inhaled.

Ingestion Toxic if swallowed.

Skin May cause irritation on prolonged or repeated contact. Harmful in contact with skin.

Eyes Irritating to eyes.

Potential chronic health effects

Chronic effects	Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.
Mutagenicity	Contains material which may cause heritable genetic effects.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
Target organs	Contains material which causes damage to the following organs: blood, Review Section 2 and 11 for any additional assessments.

Over-exposure signs/symptoms

Inhalation	Adverse symptoms may include the following: respiratory tract irritation, coughing,
Ingestion	No specific data.
Skin	No specific data.
Eyes	Adverse symptoms may include the following: pain or irritation, watering, redness,
Medical conditions aggravated by over-exposure	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See section 11 for more detailed information on health effects and symptoms.

3. Composition/Information on ingredients

<u>Ingredient name</u>	<u>CAS number</u>	<u>WT %</u>
PROPRIETARY	68479-98-1	70.0 - 100.0

** Any applicable Canadian trade secret numbers will be listed in Section 15.

4. First aid measures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If

unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Ingestion Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first aid personnel No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Flammability of the product In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media **Suitable**

Use an extinguishing agent suitable for the surrounding fire.

Not suitable

Water or fog may cause frothing which can be violent, especially if sprayed into containers of hot or burning liquid.

Special exposure hazards Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products Decomposition products may include the following materials: carbon oxides, nitrogen oxides,

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or

air).

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to

the workstation location.

Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eyes	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Form	Liquid
Flash point	135 °C(275 °F) Tag Closed Cup ASTM D 56
Color	Clear.
Odor	Pungent
Boiling point	308 °C(586 °F)
Relative density	1.02
Solubility	Slightly
Vapor density	6.2

10. Stability and reactivity

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Avoid exposure - obtain special instructions before use. Keep away from heat, sparks, flame and other ignition sources.
Materials to avoid	strong oxidizing agents,
Other hazards	Heating this substance above 300 deg. F in the presence of air may cause slow oxidative decomposition; above 500 deg. F polymerization may occur. Some combinations of resins and curing agents can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants Fumes and vapors from the thermal and chemical decompositions vary widely in composition and toxicity.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition

products may include the following materials: nitrogen oxides, carbon monoxide, other organic compounds,

11. Toxicological information

Acute toxicity

Ingredient name

diethylmethylbenzenediamine

LD50 Oral	Rat	472 mg/kg
LC50 Inhalation	Rat	> 2.45 mg/l/1 h
LD50 Dermal	Rabbit	> 1,000 mg/kg

Other Toxicological Information

Carcinogenicity

Classification

Ingredient name

diethylmethylbenzenediamine

ACGIH	Not classified
IARC	Not classified
NTP	Not listed
OSHA	Not regulated
EU	Not classified

12. Ecological information

Environmental effects

No known significant effects or critical hazards.

Other adverse effects

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International transport regulations

Regulatory information	UN/NA number	Proper shipping name	Classes/*PG	Reportable Quantity (RQ)
CFR		Non-regulated		
TDG		Non-regulated		
IMO/IMDG		Non-regulated		
IATA (Cargo)		Non-regulated		

*PG : Packing group

15. Regulatory information

US regulations

HCS Classification Toxic material, Irritating material, Carcinogen, Target organ effects

U.S. Federal regulations **SARA 311/312 Classification** Immediate (acute) health hazard, Delayed (chronic) health hazard

SARA 313 - Supplier Notification

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

None required.

SARA 302 Extremely Hazardous Substances None required.

State regulations **Massachusetts RTK Substances** None required.

New Jersey RTK Hazardous Substances None required.

Pennsylvania RTK Hazardous Substances None required.

California Prop. 65: None required.

Canada

WHMIS (Canada) Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists **Canadian NPRI:** None required.

International regulations

Chemical inventories

Europe inventory All components are listed or exempted.
Philippines inventory (PICCS) All components are listed or exempted.
New Zealand Inventory (NZIoC) All components are listed or exempted.
Korea inventory (KECI) All components are listed or exempted.
Japan inventory (ISHL) Not determined.
Japan inventory (ENCS) All components are listed or exempted.
China inventory (IECSC) All components are listed or exempted.
Australia inventory (AICS) All components are listed or exempted.
Canada inventory All components are listed or exempted.
United States inventory (TSCA 8b) All components are listed or exempted.

16. Other information

Hazardous Material Information System III (U.S.A.)

Health : 2
Flammability: 1
Physical hazards : 0
Chronic : *

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Notice to reader	

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