

MATERIAL SAFETY DATA SHEET

SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Matrix Drilling Fluids Ltd.** DATE: Oct 4, 2010
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PRODUCT NAME: **Matrix D-Worm 2**

PRODUCT USE: Oil well drilling additive

CHEMICAL FAMILY: Borate Solution CAS #: 1333-73-9
107-21-1

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: D-2A, E
WORKPLACE HAZARD: Teratogen, Corrosive

TRANSPORTATION OF DANGEROUS GOODS (TDG)

PROPER SHIPPING NAME: Corrosive Liquids, N.O.S. (sodium borate)
TDG CLASSIFICATION: 8
UN NUMBER (PIN): UN1760
PACKING GROUP: II

SECTION II: HAZARDOUS INGREDIENTS

<u>INGREDIENT</u>	<u>PERCENT</u>	<u>CAS NUMBER</u>	<u>LD₅₀ Oral-Rat</u>	<u>LC₅₀ Inhal-Rat</u>	<u>ACGIH-TLV</u>
Boric Acid, sodium salt	10-30 wt%	1333-73-9	Not Determined	Not Determined	Not Determined
Ethylene Glycol	15-40 wt%	107-21-1	4700 mg/kg	Not Determined	Not Determined

SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: [XX] EYE CONTACT [XX] SKIN [XX] INHALATION [XX] INGESTION

TRESHOLD LIMIT VALUE: Ethylene Glycol:
OSHA PEL: CL 50 ppm
ACGIH TLV: CL 50 ppm (vapour)

EYE CONTACT: Liquid, vapour or mist causes severe irritation, experienced as stinging, excess blinking and tear production, with excess redness of the conjunctiva. May cause swelling, and blistering.

SKIN CONTACT:	Skin contact may produce severe irritation, redness, swelling, and possible blistering.
INGESTION:	May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, lumbar pain, oligurea, uraemia and central nervous system effects including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary oedema may develop. Severe kidney damage follows the swallowing of large volumes of ethylene glycol. May be fatal.
INHALATION:	May cause irritation of the nose and throat with headache, particularly from mist. High vapour concentrations caused for example by heating the material in an enclosed and poorly ventilated workplace may produce nausea, vomiting, headache, dizziness and irregular eye movements.
CARCINOGENICTY:	Not available.
TERATOGENICITY:	Ethylene Glycol: Very toxic; embryotoxicity and tertogenicity observed in animal studies. Doses were not toxic to the mother. Boric Acid: Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. Boric acid studies in rat, mouse and rabbit, at high doses, demonstrate developmental effects on the fetus, including fetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would be normally exposed.
REPRODUCTIVE TOXICITY:	Not available.
MUTAGENICTY:	Not available.
DEVELOPMENTAL TOXICITY:	Not available.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT:	Flush skin with soap and water for 15 minutes after contact. Wash contaminated clothing before reuse. If irritation develops or persists, seek medical attention.
EYE CONTACT:	Flush eyes immediately with water for 15 minutes or until irritation subsides. Seek medical attention.
INGESTION:	If swallowed and patient is conscious, give two glasses of water. Do not induce vomiting. Obtain medical attention without delay. Contact poison control center.
INHALATION:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep at rest. Seek medical attention.

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR:	Clear Liquid; Glycol Odour
SPECIFIC GRAVITY:	1.145

BOILING POINT (°C):	Not determined
MELTING POINT (°C):	Not determined
FREEZE POINT (°C):	<-30°C
SOLUBILITY IN WATER:	Miscible
PERCENT VOLATILE BY VOLUME:	Not determined
VAPOUR PRESSURE (mmHg):	Not determined
EVAPORATION RATE:	Not determined
VAPOUR DENSITY (AIR=1):	Not determined
pH:	13.1

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	>100°C
FLAMMABLE LIMITS:	Not available
EXTINGUISHING MEDIA:	CO ₂ ; foam; dry chemical; water spray
SPECIAL FIRE FIGHTING PROCEDURES:	Use full protective equipment and self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None known.

SECTION VII: REACTIVITY DATA

STABILITY:	STABLE [XX]	UNSTABLE []
INCOMPATIBILITY (CONDITIONS TO AVOID):	Strong oxidizers, acids, acid chlorides, CrO ₃ , H ₂ O ₂	
CONDITIONS OF REACTIVITY:	Not known.	
HAZARDOUS DECOMPOSITION PRODUCTS:	CO _x , smoke on combustion	
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR [XX]	MAY OCCUR []

SECTION VIII: PREVENTATIVE MEASURES

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:	Use NIOSH/MSHA approved respiratory product when airborne exposure exceeds recommended limits
VENTILATION:	General mechanical
PROTECTIVE GLOVES:	Chemically resistant
EYE PROTECTION:	Goggles
OTHER PROTECTIVE EQUIPMENT (Specify):	None

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact. Store in a cool well ventilated area.

STEPS TO BE TAKEN IN CASE THE MATERIAL IS SPILLED OR RELEASED

Evacuate area. Shut off all sources of ignition, ventilate area, and clean up with suitable absorbent. Store contaminated absorbent in closed container, dispose according to local regulations.

WASTE DISPOSAL METHOD

Dispose of waste material at an approved (hazardous) waste treatment / disposal facility in accordance with applicable local, provincial and federal regulations. Do not dispose of waste with normal garbage, or sewer systems.

SECTION IX: PREPARATION

THE INFORMATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH,
BUT NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE.

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BY: Product safety committee