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Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

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SECTION 1. ----- CHEMICAL IDENTIFICATION -----

CATALOG #: 6H60-1-13

NAME: BORANE TETRAHYDROFURAN COMPLEX SOLUTION IN THF

SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>CONCENTRATION</u>
TETRAHYDROFURAN	109-99-9	60 - 100 %
TETRAHYDROFURAN-BORANE	14044-65-6	5 - 10 %

<u>CHEMICAL NAME</u>	<u>MOL. FORMULA</u>	<u>MOL. WEIGHT</u>
TETRAHYDROFURAN	C ₄ H ₈ O	72.11
TETRAHYDROFURAN-BORANE	C ₄ H ₁₁ BO	85.94

SECTION 3. ----- HAZARDS IDENTIFICATION -----

LABEL PRECAUTIONARY STATEMENTS

HIGHLY FLAMMABLE LIQUID.

HARMFUL.

HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.

IRRITANT.

IRRITATING TO THE EYES, RESPIRATORY SYSTEM AND SKIN.

REACTS VIOLENTLY WITH WATER.

TARGET ORGAN

LIVER, KIDNEYS, NERVES.

SECTION 4. ----- FIRST-AID MEASURES-----

GENERAL ADVICE

CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE. MOVE OUT OF DANGEROUS AREA

IF INHALED

IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION, CONSULT A PHYSICIAN.

IN CASE OF SKIN CONTACT

WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.

IN CASE OF EYE CONTACT

RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

IF SWALLOWED

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.

SECTION 5. ----- FIRE FIGHTING MEASURES-----

FLASH POINT

-17 °C - CLOSED CUP

EXTINGUISHING MEDIA

SUITABLE: FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

UNSUITABLE: DO NOT USE WATER.

COOL ALL AFFECTED CONTAINERS WITH FLOODING QUANTITIES OF WATER.

FIREFIGHTING

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIFIC HAZARD(S): EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

PERSONAL PRECAUTIONS

USE PERSONAL PROTECTIVE EQUIPMENT. WEAR RESPIRATORY PROTECTION. AVOID BREATHING VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. SLIPPERY WHEN SPLIT.

ENVIRONMENTAL PRECAUTIONS

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

METHODS FOR CLEANING UP

CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS. DO NOT FLUSH WITH WATER.

SECTION 7. ----- HANDLING AND STORAGE-----

HANDLING

USER EXPOSURE: AVOID INHALATION. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.
USE EXPLOSION-PROOF EQUIPMENT. KEEP AWAY FROM SOURCES OF IGNITION.
TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE.

STORAGE

SUITABLE: TIGHTLY CLOSED CONTAINERS IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. NEVER ALLOW PRODUCT TO GET IN CONTACT WITH WATER DURING STORAGE. STORE IN COOL, DRY PLACE. MOISTURE SENSITIVE. STORE UNDER INERT GAS. HEAT SENSITIVE. RECOMMENDED STORAGE TEMPERATURE: 2 - 8 °C. DRY RESIDUE IS EXPLOSIVE.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

ENGINEERING CONTROLS

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: USE A FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (EN 14387) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

HAND: PROTECTIVE GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE.

EYE: CHEMICAL SAFETY GOGGLES.

SKIN AND BODY: IMPERVIOUS CLOTHING, FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

GENERAL HYGIENE MEASURES

WASH THOROUGHLY AFTER HANDLING.

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE

COLORLESS LIQUID

PHYSICAL PROPERTIES

BOILING POINT: 65.5 - 66.5 °C

DENSITY: 0.90 g/ml @ 25 °C

SECTION 10. -----STABILITY AND REACTIVITY-----

STABILITY

STABLE: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

MATERIALS TO AVOID: OXIDIZING AGENTS, ACID CHLORIDES, OXYGEN, ACIDS, ALCOHOLS.

REACTS VIOLENTLY WITH WATER.

CONDITIONS TO AVOID: HEAT, FLAMES AND SPARKS, EXTREMES OF TEMPERATURE, MOISTURE AND DIRECT SUNLIGHT.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON OXIDES, HYDROGEN CHLORIDE GAS.

HAZARDOUS POLYMERIZATION

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ROUTE OF EXPOSURE

INHALATION: HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

SKIN: HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION.

EYES: CAUSES EYE IRRITATION.

INGESTION: HARMFUL IF SWALLOWED.

TARGET ORGANS: KIDNEYS, LIVER, CENTRAL NERVOUS SYSTEM.

SIGNS AND SYMPTOMS OF EXPOSURE:

COUGH, CHEST PAIN, DIFFICULTY IN BREATHING. EXPOSURE TO HIGH AIRBORNE CONCENTRATIONS CAN CAUSE ANESTHETIC EFFECTS.

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND

TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

PRODUCT

OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. ----- TRANSPORT INFORMATION -----

DOT

UN3399 - HC 4.3 (3) - PG I

SECTION 15. ----- REGULATORY INFORMATION -----

EU ADDITIONAL CLASSIFICATION

SYMBOL OF DANGER: F, X_n, Xi

INDICATION OF DANGER: FLAMMABLE. HARMFUL. IRRITANT.

RISK STATEMENTS: 11-14-18-20/21/22-36/37/38

SAFETY STATEMENTS: 16-23-24/25-30-33-36/37/39-45

UNITED STATES REGULATORY INFORMATION

TSCA: LISTED ON TSCA INVENTORY; FOR R&D USE ONLY

SECTION 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. SYNQUEST LABS, INC. SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.