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Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

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

CATALOG #: 2623-3-20

NAME: ETHYL 4-(1,1,2,2-TETRAFLUOROETHOXY)BENZOATE

SYNONYM: HFE-10114EP

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

CAS NUMBER: 37178-69-1

MDL NUMBER: MFCD00040321

MOLECULAR FORMULA: $C_{11}H_{10}F_4O_3$

MOLECULAR WEIGHT: 266.19

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

LABEL PRECAUTIONARY STATEMENTS

IRRITANT.

IRRITANT TO SKIN AND EYES.

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

ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN IMMEDIATELY.

INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CONSULT A PHYSICIAN.

EYE EXPOSURE

ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS. CONSULT A PHYSICIAN.

DERMAL EXPOSURE

IN CASE OF CONTACT, WASH SKIN IMMEDIATELY WITH SOAP AND COPIOUS AMOUNTS OF WATER. CONSULT A PHYSICIAN.

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

EXTINGUISHING MEDIA

SUITABLE: FOR SMALL (INCIPIENT) FIRES, USE MEDIA SUCH AS "ALCOHOL" FOAM, DRY CHEMICAL, OR CARBON DIOXIDE. FOR LARGE FIRES, APPLY WATER FROM AS FAR AS POSSIBLE. USE VERY LARGE QUANTITIES (FLOODING) OF WATER APPLIED AS A MIST OR SPRAY; SOLID STREAMS OF WATER MAY BE INEFFECTIVE. COOL ALL AFFECTED CONTAINERS WITH FLOODING QUANTITIES OF WATER.

ENVIRONMENTAL PRECAUTIONS

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

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-----

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

EVACUATE AREA.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES. AVOID BREATHING VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. BEWARE OF VAPOURS ACCUMULATING TO FORM EXPLOSIVE CONCENTRATIONS. VAPOURS CAN ACCUMULATE IN LOW AREAS.

ENVIRONMENTAL PRECAUTIONS

DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

METHODS FOR CLEANING UP

COVER WITH DRY LIME OR SODA ASH, PICK UP, KEEP IN A CLOSED CONTAINER AND HOLD FOR WASTE DISPOSAL.

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

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

HANDLING

USER EXPOSURE: AVOID CONTACT AND INHALATION. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

AVOID INHALATION OF VAPOR, MIST, OR GAS. KEEP AWAY FROM SOURCES OF IGNITION.

TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE.

STORAGE

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE.

CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. STORE IN COOL PLACE. PROTECT FROM DIRECT SUNLIGHT.

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

ENGINEERING CONTROLS

SAFETY SHOWER AND EYE BATH. USE ONLY IN A CHEMICAL FUME HOOD.

PERSONAL PROTECTIVE EQUIPMENT

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE 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 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. WASH AND DRY HANDS.
EYE PROTECTION: SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO EN166. USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).
SKIN AND BODY PROTECTION: COMPLETE SUIT PROTECTING AGAINST CHEMICALS, 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. WASH CONTAMINATED CLOTHING BEFORE REUSE. DISCARD CONTAMINATED SHOES.
KEEP AWAY FROM HEAT AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

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

APPEARANCE AND ODOR

COLORLESS LIQUID

PHYSICAL PROPERTIES

BOILING POINT:	234°C
DENSITY:	1.3674 g/mL @ 18 °C
REFRACTIVE INDEX:	1.4461 @ 25 °C

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

STABILITY

STABLE: STABLE UNDER RECOMMENDED CONDITIONS.
MATERIALS TO AVOID: OXIDIZING AGENTS, STRONG BASES.
CONDITIONS TO AVOID: HEAT, FLAMES, SPARKS. EXTREMES OF TEMPERATURE AND DIRECT SUNLIGHT.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON OXIDES, HYDROGEN FLUORIDE.

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

ROUTE OF EXPOSURE

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN. CAUSES SKIN IRRITATION.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION.

INGESTION: MAY BE HARMFUL IF SWALLOWED.

EYES: IRRITATING TO EYES.

SIGNS AND SYMPTOMS OF EXPOSURE

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 -----

THIS COMBUSTIBLE MATERIAL MAY BE BURNED IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

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

UNRESTRICTED

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

EU ADDITIONAL CLASSIFICATION

SYMBOL OF DANGER: Xi

INDICATION OF DANGER: IRRITANT.

RISK STATEMENTS: 36/37/38

SAFETY STATEMENTS: 23-24/25-26-36/37/39-45

US CLASSIFICATION AND LABEL TEXT

TSCA: NOT 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.