



## SynQuest Laboratories, Inc.

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# Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

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

CATALOG #: 2104-3-19  
NAME: FLUOROLINK D10-H  
SYNONYM: DIHYDROXY DERIVATIVE OF PERFLUOROPOLYOXYALKANE  
CHEMICAL FAMILY: PERFLUOROPOLYOXYALKANE

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

CAS #: 107852-51-7  
MF: MIXTURE; AVERAGE MOLECULAR WEIGHT = 700

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

#### EFFECTS OF OVEREXPOSURE

EYE CONTACT MAY CAUSE SLIGHT IRRITATION.  
SKIN CONTACT MAY CAUSE SLIGHT IRRITATION.  
INHALATION OF VAPORS OR MISTS MAY CAUSE RESPIRATORY TRACT IRRITATION.  
INGESTION MAY CAUSE NAUSEA, AND VOMITING.

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

#### EYE CONTACT

FLUSH EYES FOR 15 MINUTES WITH COPIOUS AMOUNTS OF WATER, RETRACTING EYELIDS OFTEN. SEEK MEDICAL ATTENTION FOR PERSISTENT IRRITATION.

#### SKIN CONTACT

WASH SKIN THOROUGHLY WITH MILD SOAP AND WATER. FLUSH WITH LUKEWARM WATER FOR 15 MINUTES. SEEK MEDICAL ATTENTION FOR PERSISTENT IRRITATION.

#### INHALATION

IF SYMPTOMS OF IRRITATION, DISCOMFORT OR OVERCOME BY EXPOSURE, REMOVE AFFECTED PERSON TO FRESH AIR. GIVE OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED.

#### INGESTION

IF CONSCIOUS, DRINK THREE TO FOUR 8 OUNCE GLASSES OF WATER OR MILK. INDUCE VOMITING. IMMEDIATELY CONTACT A PHYSICIAN. IF UNCONSCIOUS, IMMEDIATELY TAKE AFFECTED PERSON TO A HOSPITAL. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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

FLASH POINT: NOT APPLICABLE  
LOWER EXPLOSIVE LIMIT: NOT APPLICABLE  
UPPER EXPLOSIVE LIMIT: NOT APPLICABLE  
AUTOIGNITION TEMPERATURE: NOT APPLICABLE  
EXTINGUISHING MEDIA: WATER (SPRAY OR FOG), FOAM, DRY CHEMICAL OR CARBON DIOXIDE (CO<sub>2</sub>).

**UNUSUAL FIRE HAZARDS**

FLUOROPOLYMERS WILL DEGRADE UPON PROLONGED HEATING OR IN A FIRE, LIBERATING HYDROGEN FLUORIDE (HF) AND CARBONYL FLUORIDE (COF<sub>2</sub>). THIS GAS IS TOXIC IF INHALED OR IT COMES INTO CONTACT WITH MOIST SKIN. HF HAS AN ACGIH PEL TLV (8HR TWA) OF 0.5 ppm AND A CEILING LIMIT OF 2 ppm (1.7 mg/m<sup>3</sup>). COF<sub>2</sub> HAS AN ACGIH TLV OF 2 ppm (5.4 mg/m<sup>3</sup>) AND AN OSHA PEL TWA OF 2 ppm (5 mg/m<sup>3</sup>).

**FIRE FIGHTING PROCEDURES**

USE SELF CONTAINED BREATHING APPARATUS (SCBA) AND FULL FIRE FIGHTING TURN OUT GEAR (BUNKER GEAR) FOR PROTECTION FROM ACID GAS EXPOSURE. DO NOT ENTER FIRE AREA WITHOUT PROPER PROTECTION. FIGHT FIRE FROM SAFE DISTANCE. IF POSSIBLE, AIR MONITORING SHOULD BE PERFORMED.

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

IN CASE OF A RELEASE OR SPILL, ABSORB MATERIAL ONTO VERMICULITE OR SIMILAR INERT ABSORBENT. USE PERFLUOROSOLV0 PFS-1 SOLVENT TO CLEAN ANY RESIDUAL FLUID. PLACE SPILLED MATERIAL INTO COVERED CONTAINER FOR DISPOSAL. DISPOSE OF ACCORDING TO APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. EXTINGUISH ALL IGNITION SOURCES AND EVACUATE THE AREA. EXERCISE CAUTION; SPILL AREA MAY BE SLIPPERY.

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

WASH HANDS AFTER USE AND BEFORE HANDLING FOOD OR APPLYING COSMETICS. DO NOT USE TOBACCO PRODUCTS IN THE IMMEDIATE AREA. AVOID CONTACT WITH SKIN AND EYES. WEAR THE PROPER PERSONAL PROTECTIVE EQUIPMENT. AVOID MOISTURE IN CONTAINERS. KEEP CONTAINERS CLOSED. KEEP AWAY FROM HEAT, SPARKS AND FLAMES. DO NOT STORE NEAR COMBUSTIBLE MATERIALS. STORE IN PLASTIC OR GLASS CONTAINERS ONLY.

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

ACGIH THRESHOLD LIMIT VALUE (8 HR. TIME WEIGHTED AVERAGE)

HYDROGEN FLUORIDE, CEILING VALUE: 3 ppm (2.6 mg/m<sup>3</sup>)

OSHA PERMISSIBLE EXPOSURE LIMIT VALUE (8 HR. TIME WEIGHTED AVERAGE)

HYDROGEN FLUORIDE: 3 ppm

ENGINEERING CONTROLS:

VENTILATION REQUIREMENTS: LOCAL EXHAUST: VENT VAPORS OR MISTS GENERATED BY PROCESSING AWAY FROM OPERATING PERSONNEL. LOCAL EXHAUST VENTILATION AT A RATE OF 50 FEET PER MINUTE.

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION: NO OCCUPATIONAL EXPOSURE STANDARDS HAVE BEEN DEVELOPED FOR THIS MATERIAL. IN SITUATIONS WHERE EXPOSURE TO VAPORS OR MISTS IS LIKELY, NIOSH/MSHA APPROVED ACID AND ORGANIC VAPOR RESPIRATORS ARE RECOMMENDED. RESPIRATOR USE LIMITATIONS MADE BY NIOSH/MSHA OR THE MANUFACTURER MUST BE OBSERVED. RESPIRATORY PROTECTION PROGRAMS MUST BE IN ACCORDANCE WITH 29 CFR 1910.134.

EYE PROTECTION: EYE/FACE PROTECTION: ANSI Z87.1 APPROVED SAFETY GLASSES WITH SIDE SHIELDS OR EQUIVALENT, CHEMICAL SAFETY GOGGLES.

SKIN PROTECTION: RUBBER OR NEOPRENE GLOVES

PROTECTIVE CLOTHING: WORK SUIT OR RUBBER APRON

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

COLOR: CLEAR, COLORLESS

ODOR: ODORLESS

SPECIFIC GRAVITY: 1.79 g/cm<sup>3</sup> @ 20 °C

SOLUBILITY IN WATER: INSOLUBLE

SOLUBILITY IN SOLVENTS: SOLUBLE IN FLUORINATED SOLVENTS

MOLECULAR WEIGHT: 700

VISCOSITY: 85 cSt

## **SECTION 10. -----STABILITY AND REACTIVITY -----**

STABILITY

THIS MATERIAL IS STABLE.

REACTIVITY

THIS MATERIAL IS NOT REACTIVE.

CONDITIONS TO AVOID

HEAT, SPARKS, FLAMES, AND OTHER IGNITION SOURCES; AVOID HEATING ABOVE 200 °C/392 °F.

MATERIALS TO AVOID

STRONG ALKALINE COMPOUNDS (ALKALINE HYDROXIDES, AMMONIA, NON-AQUEOUS ALKALIS); LEWIS ACIDS (AlCl<sub>3</sub>, SbF<sub>5</sub>) ABOVE 100 °C (212 °F); MAGNESIUM, ALUMINUM, AND THEIR ALLOYS ABOVE 100 °C (212 °F).

HAZARDOUS DECOMPOSITION PRODUCTS

THERMAL DECOMPOSITION OF THIS PRODUCT WILL GENERATE HYDROGEN FLUORIDE (HF) AND CARBONYL FLUORIDE, BOTH OF WHICH ARE TOXIC. HYDROGEN FLUORIDE IS CORROSIVE, CAUSING BURNS ON CONTACT WITH SKIN AND OTHER TISSUE.

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

RAT ORAL LD50  
GREATER THAN 5 g/kg  
RABBIT SKIN IRRITATION  
SLIGHTLY IRRITATING  
RABBIT EYE IRRITATION  
NOT IRRITATING  
GUINEA PIG SENSITIZATION  
NEGATIVE (NOT A SENSITIZER)  
NO OTHER KNOWN EFFECTS.

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

DO NOT ALLOW MATERIAL TO ENTER DRAINS OR WATER COURSES.

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

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

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

SHIPPING CLASS  
NOT REGULATED BY DOT

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

ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TOXIC SUBSTANCES CONTROL ACT (TSCA) SECTION 8(B) CHEMICAL INVENTORY. THIS PRODUCT IS NOT A "HAZARDOUS SUBSTANCE" AS DEFINED BY OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200). THIS PRODUCT IS NOT A "CONTROLLED PRODUCT" AS DEFINED BY THE CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS).  
SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: NOT LISTED  
SARA 311/312:  
ACUTE: NO  
CHRONIC: NO  
FIRE: NO  
REACTIVITY: NO  
SUDDEN RELEASE OF PRESSURE: NO  
SARA SECTION 313 TOXIC CHEMICALS: NOT LISTED

**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.