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Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

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

CATALOG #: 3137-2-X0

NAME: NONAFLUOROPENTANITRILE

SYNONYM: PERFLUOROPENTANENITRILE; HEPTAFLUOROPENTYL CYANIDE;
2,2,3,3,4,4,5,5,5-NONAFLUOROPENTANENITRILE

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

CAS NUMBER: 22325-71-9

MDL NUMBER: MFCD04039182

MOLECULAR FORMULA: C₅F₉N

MOLECULAR WEIGHT: 245.05

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

LABEL PRECAUTIONARY STATEMENTS

TOXIC.

TOXIC BY INHALATION AND IF ABSORBED THROUGH SKIN.

RISK OF EXPLOSION IF HEATED UNDER CONFINEMENT.

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

INHALATION EXPOSURE

IF INHALED, REMOVE EXPOSED TO FRESH AIR. IF BREATHING IS DIFFICULT,
CALL A PHYSICIAN IMMEDIATELY.

DERMAL EXPOSURE

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

EYE EXPOSURE

IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF
WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY
SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN IMMEDIATELY.

ORAL EXPOSURE

NOT A NORMAL ROUTE OF ENTRY. IF SWALLOWED, WASH OUT MOUTH WITH
WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.

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

FLASH POINT

NO DATA AVAILABLE.

EXTINGUISHING MEDIA

SUITABLE: WATER SPRAY, DRY FOAM, CARBON DIOXIDE.

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.

CYLINDERS MAY RUPTURE UNDER FIRE CONDITIONS. COOL ALL AFFECTED CONTAINERS WITH FLOODING QUANTITIES OF WATER.

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

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

EVACUATE AREA. ALLOW GAS TO DISSIPATE.

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. BEWARE OF VAPORS ACCUMULATING IN LOWER AREAS.

ENVIRONMENTAL PRECAUTIONS

THE PRODUCT EVAPORATES READILY. PREVENT PRODUCT FROM ENTERING DRAINS.

METHODS FOR CLEANING UP

IF IT IS SAFE TO DO SO, LOCATE AND SHUT OFF THE SOURCE OF THE LEAKING GAS.

PROPERLY LABEL THE DEFECTIVE CYLINDER, ISOLATE IT AND PREPARE TO RETURN IT TO THE MANUFACTURER IN ACCORDANCE WITH ALL APPLICABLE SHIPPING REGULATIONS. VENTILATE AREA.

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

HANDLING

USER EXPOSURE: AVOID INHALATION. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

PRESSURIZED CONTAINER: PROTECT FROM SUNLIGHT AND DO NOT EXPOSE TO TEMPERATURES EXCEEDING 50 °C. DO NOT PIERCE OR BURN, EVEN AFTER USE.

FIRE OR INTENSE HEAT MAY CAUSE VIOLENT RUPTURE.

STORAGE

SUITABLE: STORE IN TIGHTLY CLOSED, AIRTIGHT, MOISTURE-PROOF CYLINDERS OR TANKS IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM HEAT, SOURCES OF IGNITION, AND SPARKS. PROTECT THE PRESSURIZED CONTAINERS FROM PHYSICAL DAMAGE.

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

ENGINEERING CONTROLS

SAFETY SHOWER AND EYE BATH. HIGHLY EFFECTIVE EXHAUST REQUIRED.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: USE A FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (EN 166) 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.

EYE: CHEMICAL SAFETY GOGGLES.

GENERAL HYGIENE MEASURES

WASH THOROUGHLY AFTER HANDLING.

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

APPEARANCE AND ODOR

GAS @ 25 °C AND 760 MMHG.

PHYSICAL PROPERTIES

BOILING POINT: 15 °C

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

STABILITY

STABLE: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS.

CONDITIONS TO AVOID: DO NOT PIERCE OR BURN, EVEN AFTER USE. DO NOT SPRAY ON A NAKED FLAME OR ANY INCANDESCENT MATERIAL. HEAT, FLAMES AND SPARKS.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON OXIDES, NITROGEN OXIDES, HYDROGEN FLUORIDE, HYDROGEN CYANIDE.

HAZARDOUS POLYMERIZATION

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

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

ROUTE OF EXPOSURE

INHALATION: MAY BE FATAL IF INHALED.

SKIN: MAY BE FATAL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. MAY CAUSE FROSTBITE.

EYES: MAY CAUSE EYE IRRITATION.

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 -----

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE
OF THIS MATERIAL. OBSERVE ALL FEDERAL, STATE, AND LOCAL
ENVIRONMENTAL REGULATIONS.

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

UN3162 - HC 2.3 - INHALATION HAZARD ZONE B

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

EU ADDITIONAL CLASSIFICATION

SYMBOL OF DANGER: T

INDICATION OF DANGER: LIQUEFIED GAS. TOXIC.

RISK STATEMENTS: 23/24-44

SAFETY STATEMENTS: 9-23-24/25-26-36/37/39-38-45-47

UNITED STATES REGULATORY INFORMATION

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.