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**Material Safety Data Sheet**

Transportation Emergency: 1-800-451-8346

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

CATALOG #: 3137-1-Y2  
NAME: MALONONITRILE  
SYNONYM: DICYANOMETHANE

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

CAS NUMBER: 109-77-3  
MDL NUMBER: MFCD00001883  
MOLECULAR FORMULA: C<sub>3</sub>H<sub>2</sub>N<sub>2</sub>  
MOLECULAR WEIGHT: 66.06

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

LABEL PRECAUTIONARY STATEMENTS

FATAL IF SWALLOWED.  
TOXIC IN CONTACT WITH SKIN OR IF INHALED.  
VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS

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

ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH COPIOUS AMOUNTS OF WATER PROVIDED PERSON IS CONSCIOUS.

INHALATION EXPOSURE

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

DERMAL EXPOSURE

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

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.

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

**FLASH POINT**

86 °C

**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.

**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 PROTECTION**

AVOID BREATHING DUST, VAPOR MIST, OR GAS. ENSURE ADEQUATE VENTILATION. WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER GLOVES, AND EYE PROTECTION. KEEP UNPROTECTED PERSONS AWAY. REMOVE ALL SOURCES OF IGNITION.

**ENVIRONMENTAL PROTECTION**

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. TAKE PRECAUTIONS TO ENSURE PRODUCT DOES NOT CONTAMINATE THE GROUND OR ENTER THE DRAINAGE SYSTEM.

**COLLECTION**

PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

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

**PRECAUTIONS FOR SAFE HANDLING**

AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED.

**CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

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

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

### COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

TWA 3 ppm 8 mg/m<sup>3</sup> USA. NIOSH RECOMMENDED EXPOSURE LIMITS

### 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 AND ODOR

SOLID

### PHYSICAL PROPERTIES

MELTING POINT:	30-34°C
BOILING POINT:	220°C
DENSITY:	1.049 g/mL @ 20 °C

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

### REACTIVITY

NO DATA AVAILABLE

### CHEMICAL STABILITY

STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

### POSSIBILITY OF HAZARDOUS REACTIONS

NO DATA AVAILABLE

### CONDITIONS TO AVOID

DO NOT HEAT OVER: 130°C

### INCOMPATIBLE MATERIALS

STRONG OXIDIZING AGENTS, STRONG ACIDS, STRONG BASES, STRONG REDUCING AGENTS

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

### INFORMATION ON TOXICOLOGICAL EFFECTS

#### ACUTE TOXICITY

LD50 ORAL - MOUSE - 19 mg/kg

LD50 DERMAL - RAT - 350 mg/kg REMARKS: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD. BEHAVIORAL: EXCITEMENT.

#### SKIN CORROSION/IRRITATION SKIN

RABBIT RESULT: MILD SKIN IRRITATION - 4 H

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

NOT YET AVAILABLE.

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

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

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

UN2647 - HC 6.1 - PG II

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

SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 302 AND 313. SARA 311/312 ACUTE HEALTH HAZARD.

**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.