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## **Material Safety Data Sheet**

Transportation Emergency: 1-800-451-8346

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

CATALOG #: M020-1-X0  
NAME: CALCIUM(II) NITRATE TETRAHYDRATE

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

CAS NUMBER: 13477-34-4  
MOLECULAR FORMULA:  $\text{CaH}_8\text{N}_2\text{O}_{10}$   
MOLECULAR WEIGHT: 236.15

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

#### **LABEL PRECAUTIONARY STATEMENTS**

IRRITANT.  
IRRITATING TO THE EYES, RESPIRATORY SYSTEM AND SKIN.  
OXIDIZER. MAY INTENSIFY FIRE.

### **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.

#### **ORAL EXPOSURE**

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

#### **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 -----**

FLASH POINT

NONE.

OXIDIZER. MAY INTENSIFY FIRE.

EXTINGUISHING MEDIA

FOAM, DRY CHEMICAL, OR CARBON DIOXIDE. COOL ALL AFFECTED CONTAINERS WITH FLOODING QUANTITIES OF WATER.

UNSUITABLE: DO NOT USE WATER.

FIREFIGHTING

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

SPECIFIC METHOD(S) OF FIRE FIGHTING: USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.

SPECIFIC HAZARD(S): EMITS TOXIC FUMES UNDER FIRE CONDITIONS AND IN CONTACT WITH WATER.

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

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

EVACUATE PERSONNEL TO A SAFE PLACE.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES. AVOID DUST FORMATION. AVOID BREATHING DUST, VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION.

ENVIRONMENTAL PRECAUTIONS

DO NOT LET PRODUCT ENTER DRAINS.

METHODS FOR CLEANING UP

SWEEP UP MATERIAL AND DISPOSE OF AS HAZARDOUS WASTE. PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS.

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

HANDLING

USER EXPOSURE: AVOID CONTACT WITH SKIN, CLOTHING AND EYES. AVOID FORMATION OF DUST AND AEROSOLS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED. DO NOT STORE NEAR, NOR ALLOW CONTACT WITH CLOTHING AND COMBUSTIBLE MATERIAL. KEEP AWAY FROM SOURCES OF IGNITION.

STORAGE

SUITABLE: KEEP CONTAINER TIGHTLY CLOSED. STORE IN A COOL DRY PLACE.

HYGROSCOPIC. STORE UNDER INERT GAS.

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

### **ENGINEERING CONTROLS**

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

### **PERSONAL PROTECTIVE EQUIPMENT**

RESPIRATORY: WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A DUST MASK TYPE N95 (US) OR TYPE P1 (EN 143) RESPIRATOR.

USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

HAND: 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: TIGHTLY FITTING CHEMICAL SAFETY GOGGLES.

### **GENERAL HYGIENE MEASURES**

WASH HANDS THOROUGHLY AFTER HANDLING. AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

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

### **APPEARANCE AND ODOR**

SOLID

### **PHYSICAL PROPERTIES**

MELTING POINT: 44 °C

DENSITY: 1.82 g/ml @ 20 °C

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

### **STABILITY**

STABLE: STABLE UNDER RECOMMENDED CONDITIONS.

CONDITIONS TO AVOID: OPEN FIRE AND FLAMES, EXTREMES OF TEMPERATURE, MOISTURE AND DIRECT SUNLIGHT.

MATERIALS TO AVOID: AVOID CONTACT WITH COMPUSTIBLE MATERIAL (PAPER, WOOL, OIL).

### **HAZARDOUS DECOMPOSITION PRODUCTS**

HAZARDOUS DECOMPOSITION PRODUCTS: NITROGEN OXIDES, CALCIUM OXIDE.

### **HAZARDOUS POLYMERIZATION**

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

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

### **ROUTE OF EXPOSURE**

INHALATION: MAY BE HARMFUL IF INHALED. IRRITATING TO THE RESPIRATORY TRACT.

INGESTION: MAY BE HARMFUL IF SWALLOWED.

SKIN: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. IRRITATING TO THE SKIN.

EYES: IRRITATING TO THE EYES.

### **SIGNS AND SYMPTOMS OF EXPOSURE**

TO THE BEST OF OUR KNOWLEDGE, THE TOXICOLOGICAL PROPERTIES OF THIS PRODUCT HAVE NOT BEEN FULLY DETERMINED.

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

DATA 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. OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

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

DOT  
1454 - HC: 5.1 - PG: III

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

EU ADDITIONAL CLASSIFICATION  
SYMBOL OF DANGER: O, Xi  
INDICATION OF DANGER: OXIDISING. IRRITANT.  
RISK STATEMENTS: 8-36/37/38  
SAFETY STATEMENTS: 17-22-24/25-26-36/37/39-45  
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.