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MATERIAL SAFETY DATA SHEET

MXBON® 424

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Item No.: MXBON® 424

Product Type: Cyanoacrylate Ester

2. COMPOSITION, INFORMATION ON INGREDIENTS

| Ingredients | CAS No. | % |
|---------------------|-----------|----------|
| Ethyl Cyanoacrylate | 7085-85-0 | 90 – 100 |

| Exposure Limits (TWA) | ACGIH | OSHA | OTHER |
|-----------------------|-----------|-------|-------|
| Ingredients | (TLV) | (PEL) | |
| Ethyl Cyanoacrylate | 0.2ppmTWA | None | None |

3. HAZARDS IDENTIFICATION

HMIS® Code:

- Health Hazard: 2
- Flammability Hazard: 2
- Reactivity Hazards: 1
- Personal Protection: See Section 8.

WARNING:

- BONDS SKIN IN SECONDS
- MAY CAUSE EYE AND RESPIRATORY IRRITATION
- COMBUSTIBLE LIQUID AND VAPOR

Routes of exposure: Skin, eyes, and inhalation.

Potential Health Effects

- Inhalation: Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and feeling of tightness in the chest.
- Skin contact: Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reactions but due to the rapid polymerization, allergic response is rare. Cyanoacrylates generate heat on polymerization, so very large amounts will burn the skin. The solidified does not present a health problem when bonded to skin.

Eye contact: Irritating to eyes. Will bond eyelids. Will cause excessive tearing.
Ingestion: Not expected to be harmful by ingestion. Rapid polymerize and bonds in mouth. It is very difficult to swallow.

Existing conditions aggravated by exposure: Respiratory, skin and eye disorders.

4. FIRST AID MEASURES

Ingestion: Ensure that breathing airways are not obstructed. The product will polymerize rapidly and bond to the mouth making swallowing extremely difficult. Usually any solidified product will separate after a few hours. Prevent any further swallowing of the separated material.

Inhalation: Remove to fresh air. If symptoms persist, get medical attention.

Skin Contact: Do not pull bonded skin apart. Soak in warm soapy water. Gently pry apart using a blunt instrument. If skin is burned because of large amounts of product, get medical attention.

Eye Contact: Immediately flush with plenty of water. Get medical attention. If eyelids are bonded shut, release eyelashes first with a wet pad and warm water. Do not force eye open. Cyanoacrylates will bond to the eye, tearing will help de-bond the adhesive. Keep eye covered until de-bonding is complete usually within 3 days. Solid particles from the polymerized product can cause abrasive damage. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: 80°C to more than 93°C Method: Tag Closed Cup

Auto ignition temperature: 485°C.

Lower explosive limit: not available

Upper explosive limit: not available

Extinguishing agents: Carbon dioxide, foam, and dry chemical

Special firefighting procedures: Fire Fighters should wear positive pressure self-contained breathing apparatus.

Hazardous combustion products: Trace amounts of toxic and irritating fumes.

Unusual Fire or Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent spill from entering drains or open waters. Ventilate area.

Clean-up procedure: Do not use cloth for clean up. Flood with water to complete polymerization and scrape up the polymer. Solid material can be disposed as a non-hazardous waste.

7. HANDLING AND STORAGE

Storage: Keep in a cool, well-ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mists. Wash thoroughly after handling. Avoid contact with fabric and

paper goods. Contact with these may cause rapid polymerization that can generate smoke and strong irritating vapors, and can cause thermal burns.

Incompatible products: No special restrictions on storage with other products.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering controls: If general ventilation is insufficient to maintain vapor concentration below established exposure limits, use positive downdraft exhaust ventilation.

Respiratory protection: If there is a potential to exceed exposure limits, use an approved respirator.

Eyes / face protection: Safety glasses with side shields or chemical splash goggles.

Skin protection: Use Nitrile gloves and aprons to prevent contact. Do Not Use PVC, nylon or cotton.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid.

Color: Clear colorless to straw.

Odor: Sharp, irritating.

Boiling Point / range: Greater than 150 °C.

Melting point / range: Not Determined.

pH: Not applicable

Solubility in Water: Polymerizes in the presence of water.

Specific Gravity: 1.05 @ 25 °C

Partition coefficient (octanol/water): Not applicable.

VOC content: Less than 2%; 20 g/l (California SCAQMD Method 316B).

Vapor Pressure: Less than 0.2 mm Hg

Vapor Density: Approximately 3.

Evaporation Rate: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Hazardous polymerization: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

Incompatibility: Water, amines, alkalis, and alcohols.

Conditions to Avoid: Spontaneous polymerizations.

Hazardous decomposition products: None.

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Acute oral LD50 greater than 5,000 mg/kg (rat)(estimated).. Acute dermal LD50 greater than 2000 mg/kg (rabbit)(estimated).

Carcinogen Status

| Hazardous component | NTP Carcinogen | OSHA Carcinogen | IARC Carcinogen |
|---------------------|----------------|-----------------|-----------------|
| Ethyl Cyanoacrylate | No | No | No |

Literature Referenced Target Organ & Other Health Effects

| Hazardous component | Health Effects / Target Organ |
|---------------------|---------------------------------|
| Ethyl cyanoacrylate | Allergen, Irritant, Respiratory |

12. ECOLOGICAL INFORMATION

Ecological Information: Not Known

13. DISPOSAL INFORMATION

Dispose of according to local, province /state, country's governmental regulations

Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

US DOT - Ground (49 CFR):

Proper shipping name: Combustible liquids, n.o.s. (Cyanoacrylate ester).

Hazard class or division: 3

Identification number: NA 1993

Packing group: None.

Exceptions: (Not more than 450 liters) Unrestricted.

Marine pollutant: None.

International Air transportation - (ICAO/IATA):

Proper shipping name: Aviation regulated liquid, n.o.s. (Cyanoacrylate ester).

Hazard class or division: 9

Identification number: UN 3334

Packing group: None.

Exceptions: (Not more than 500 ml) Unrestricted.

Water Transportation - (IMO/IMDG):

Proper shipping name: Unrestricted.

Hazard class or division: None

Identification number: None

Packing group: None.

Marine pollutant: None.

15. REGULATORY INFORMATION

US Regulatory Information:

TSCA 8 (b) Inventory Status: All components are listed or exempt from listing.

TSCA 5(a)(2) SNUR: None

TSCA 12 (b) Export Notification: None

CERCLA/SARA Sec. 302 EHS: None.

CERCLA/SARA Sec. 311/312: Immediate Health Hazard, Delayed Health Hazard, Fire, and Reactive.

CERCLA/SARA Sec. 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): None.

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information:

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.

WHMIS hazard class: B.3, D.2.B.

16. OTHER INFORMATION

This MSDS contains changes from previous versions in the following sections: 15

Disclaimer: The data contained herein are furnished for informational purposes only and are believed to be reliable. However, Cr gz'I rjdcrl'Octngvpi 'NNE does not assume responsibility for any results obtained by persons over whose methods Cr gz'I rjdcrl'Octngvpi 'NNE has no control. It is the user's responsibility to determine the suitability of Cr gz'I rjdcrl'Octngvpi 'NNE's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Apex Global Marketing LLC's products. Apex Global Marketing LLC specifically disclaims all warranties express or implied, including warranties of salability and suitability for a particular purpose arising from sale or use of Apex Global Marketing LLC's products. Apex Global Marketing LLC further disclaims any liability for consequential or incremental damages of any kind including lost profits.

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