

MATERIAL SAFETY DATA SHEET

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C.D. PRODUCTS, INC. emergency telephone #
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 Appleton, WI 54911 ISSUE DATE- 7/28/03

SECTION I: PRODUCT IDENTIFICATION

PRODUCT NAME- 2210-40 MCU & 2210-20 MCU

PRODUCT CLASS- Isocyanate

HMIS CODE HEALTH- 3*, FIRE- 3, REACTIVITY- 1

HAZARD RATING: 0=LEAST, 1=SLIGHT, 2= MODERATE, 3=HIGH, 4=EXTREME

SECTION II: HAZARDOUS INGREDIENTS:

| NAME (CAS Number) | TWA/PEL | STEL | Weight % |
|---|--------------------------------------|------|---------------|
| Polyurethane resin (proprietary) | | N/E | N/E |
| Significant | | | |
| Propylene Glycol Monomethyl Ether Acetate (000108-65-6) | N/E | N/E | Minor |
| Ethyl Benzene (100-41-4) | 100 ppm | | 125 ppm Minor |
| Toluene (108-88-3) | 50 ppm TWA 200 ppm PEL | N/E | Minor |
| Xylene (1330-20-7) | 100 ppm | | 150 ppm |
| Significant | | | |
| Isophorone Diisocyanate (4098-71-9) | 0.005 ppm TWA PEL not established | N/E | Minor |

% Listing: 0-10% Minor, 10-35% Moderate 35-60% Significant >60% Major

N/E = Not Established

SECTION III: PHYSICAL DATA

BOILING RANGE: 281 – 284 F (138 – 140C)

EVAPORATION RATE VS BUTYL ACETATE: slower

VAPOR DENSITY VS AIR: Heavier

SOLUBILITY IN WATER: Insoluble

APPEARANCE AND ODOR: Clear amber liquid, aromatic odor

SPECIFIC GRAVITY: 0.95 - .962

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (F): 79F Setaflash Closed Cup

Flammable limits in air by volume: Lower: 1.0 (Xylene)

Upper: 6.6 (Xylene)

AUTOIGNITION (approximate): 527 C (Xylene)

EXTINGUISHING MEDIA: dry chemical, foam, carbon dioxide or any Class B extinguishing agent. Water may be unsuitable for extinguishing a fire involving this material, but water may be used to cool and prevent the rupture of containers of this material which are exposed to the heat of a fire.

SPECIAL FIRE FIGHTING PROCEDURES: SCBA and full fire fighting protective clothing is recommended for fire fighters. Move all persons from the fire area to an explosion-protected

area. Use water spray to keep containers cool to prevent pressure build up and autoignition or explosion. Avoid spreading burning liquid with water used for cooling.

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UNUSUAL FIRE AND EXPLOSION HAZARDS: FLAMMABLE LIQUID. Vapors may cause flash fire. Vapors can form an explosive mixture with air. This material may polymerize when its container is exposed to heat causing a pressure build up and the violent rupture of the container. Reaction between foam or water and hot isocyanate can be vigorous. Keep containers tightly closed and isolate from heat, electrical equipment, sparks and flame. Never use a welding or cutting torch on or near drum (even empty) because material, even just the residue, can ignite explosively.

HAZARDOUS COMBUSTION PRODUCTS: Combustion may produce isocyanate vapors, carbon monoxide, carbon dioxide, and irritating or toxic vapors or gas.

SECTION V: HEALTH HAZARD DATA - EFFECTS OF OVER EXPOSURE

INGESTION: may burn the mouth, throat, and stomach

INHALATION: may cause central nervous system depression with symptoms including headache, nausea, impaired judgement, confusion, blurred vision, fatigue, loss of coordination, or dizziness. Inhalation of vapor or mist may cause irritation to the nose, throat, and lungs. May cause respiratory sensitization in susceptible individuals.

SKIN CONTACT AND ABSORPTION: Contact causes severe skin irritation and may cause skin sensitization, an allergic reaction which becomes evident on re-exposure to the material.

EYE CONTACT: vapors may cause eye irritation. Direct contact causes severe eye irritation.

OTHER HEALTH HAZARDS: Reports have associated repeated or prolonged over exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. As a result of previous repeated overexposure or a single large dose, some individuals will develop isocyanate sensitization (chemical Asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TVL or MGL. These symptoms (including chest tightness, wheezing, cough, shortness of breath, or asthmatic attack) could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and, in severe cases, several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including decrease in lung function, which may be permanent. Sensitization may be temporary or permanent. Prolonged or repeated exposure may cause damage to the liver, kidneys, lungs, and heart. Female workers over-exposed to xylene experienced menstrual disorders and complications with pregnancy.

CARCINOGENICITY: NTP: No

IARC: No

OSHA: No

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Overexposure to vapor, dust, or mist may aggravate existing respiratory conditions such as asthma, bronchitis, and inflammatory or fibrotic respiratory disease.

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EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Flush with water for 15 minutes and seek immediate medical attention.

SKIN CONTACT: Wash immediately with soap and water; if irritation persists, seek medical attention.

INGESTION: Do not induce vomiting; seek medical attention immediately.

INHALATION: Remove to fresh air. Keep warm and quiet. Give artificial respiration if breathing has stopped. If breathing is difficult, give oxygen by trained personnel. Get immediate medical attention.

SECTION VI: REACTIVITY DATA

STABILITY: stable

HAZARDOUS POLYMERIZATION: may occur

CONDITIONS TO AVOIDS excessive heat (do not store above 80 F), sources of ignition, materials listed below.

MATERIALS TO AVOID: strong acids, alkalis, water, amines, alcohols, and strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Thermal decomposition or combustion may produce fumes containing carbon dioxide, and carbon monoxide, various hydrocarbons, and nitrogen oxides.

SECTION VII: SPILL OR LEAK PROCEDURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Eliminate ignition sources. Persons not wearing protective equipment should be excluded from the spill area. Avoid breathing vapors and ventilate area. Contain and remove with inert material, eg- vermiculate, sand. Scoop up and put into container for chemical waste. Use non-sparking tools to clean up spill. If large spill, flush area with water, prevent wash downs from entering the sewers and water ways. Immediately notify authorities of any reportable spill as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other waste materials to waste containers for disposal.

NOTE: In the US, this product will trigger reporting requirements under the applicable transportation regulations if released in quantities greater than 227 lbs.

WASTE DISPOSAL METHOD: This material, and containers which are not empty, are regulated as hazardous waste under RCRA. Treatment and/or disposal must be completed at a RCRA permitted Treatment, Storage, and disposal Facility (TSD). Storage and transportation are also regulated by USEPA. Contact your local, state, or federal agency for more information. "Empty" containers, as defined under 40 CFR 261.7 are not regulated as hazardous wastes.

RCRA Hazard Class: D001 (IGNITABLE) When discarded in its purchased form, this material would be regulated under 40 CFR 261.21 as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

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SECTION VIII: SPECIAL PROTECTION INFORMATION

See Hazardous Ingredients Section (Section II) for exposure limits.

RESPIRATORY: Do not breathe vapors. Use with adequate ventilation. Use engineering controls or administrative controls to reduce exposure. NIOSH/MSA approved respirators should be used when concentrations exceed the established exposure limits. NIOSH approved air-line respirators with auxiliary escape air tanks or self contained breathing apparatus should be used in confined spaces or in cases where the exposure for isocyanate is exceeded. Observe OSHA Standard 1910.134.

VENTILATION: Local exhaust or clean air dilution recommended when appropriate to control employee exposure below lower explosion limit and below current exposure limits. Refer to OSHA Standard 1910.94.

PROTECTIVE GLOVES: Chemical resistant gloves, such as polyvinyl alcohol, should be worn.

EYE PROTECTION: safety glasses with a face shield or chemical splash goggles and face shield.

OTHER PROTECTIVE EQUIPMENT: use protective clothing. Wash contaminated clothing, including shoes, before reuse.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not store above 80 F. Store in a cool, well ventilated area. Store large quantities in buildings compliant with CFR 1910.106. Keep away from heat, sparks and flame. Keep containers closed and upright when not in use.

OTHER PRECAUTIONS: Avoid skin or eye contact. Wash thoroughly after handling. Remove and launder contaminated clothing. Use with adequate ventilation. An eyewash station and safety shower should be available to workers whenever this product is stored or used. Ground and bond containers when transferring this material to prevent static sparks which could ignite vapor. Ignition may occur at temperatures below those published as "autoignition" or

“ignition” temperatures. Ignition temperatures decrease with increased vapor volume and vapor/air contact time, and are influenced by pressure changes.

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SECTION X: OTHER INFORMATION

Transportation information:

DOT: Proper Shipping Name – Resin Solution

Hazard Class: 3 – Flammable Liquid

ID Number: UN1866

Packaging Group: III

ERG Number: 127

NOTE: To the best of our knowledge, the information contained herein is accurate. However C.D. Products, Inc assumes no liability whatsoever for the accuracy or completeness of the information contained herein. The final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.