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MATERIAL SAFETY DATA SHEET

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Supersedes All Previous Publications

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SECTION I PRODUCT INFORMATION

PRODUCT NAME AND SYNONYMS: TPO BONDING ADHESIVE

CHEMICAL FAMILY: Polychoroprene Adhesive
PRODUCT USE: Contact Bonding Adhesive
FORMULA: Mixture

Table with hazard information: Health 1, Flammability 4, Reactivity 0, Specific Hazard -

SECTION II (A) HAZARDOUS INGREDIENTS

Table with hazardous ingredients: Heptane, Toluene, Magnesium Oxide. Columns include CAS Number, PEL (ppm), SKIN DESIG-NATION, LD500F INGREDIENT, LC500F INGREDIENT.

SECTION II (B) ADDITIONAL INGREDIENTS (>3%)

Ingredients: Polychloroprene - CAS # 9010-98-4
Synthetic Rubber - CAS # Not Available
Phenolic Resin - CAS # 26022-00-4

SECTION III PHYSICAL DATA

Table with physical data: Physical State, Odor and Appearance, VOC (grams/Liter), Odor Threshold (ppm), Vapor Pressure (mm Hg), Vapor Density, Evaporation Rate, Boiling Point, Freezing Point, pH, Specific Gravity, Coeff Water/Oil Dist, Solubility in Water, Volatiles by Wt (%), Corrosivity.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flammability: Yes x No If Yes, Under Which Conditions? Ignition can occur when this product is exposed to heat, sparks, or flame.

Flashpoint (°C) And Method Autoignition Temperature (°C) Lower Flammable Limit (% By Vol) Upper Flammable Limit (% by Vol)
-20 (-4°F) Closed Cup 223° (433.4°F) 1.0 12.8

Hazardous Combustion Products: Toxic gases or vapors, such as carbon monoxide, carbon dioxide, or oxides of nitrogen may be released in a fire.

EXPLOSION DATA:

Sensitivity To Impact: There is no evidence to show that this product is sensitive to physical shock.
Sensitivity To Static Discharge: As with most hydrocarbon solvents, vapors may ignite when exposed to static discharge.
Extinguishing Media: In case of fire, use dry chemical, carbon dioxide, or foam. Water may not be effective as an extinguishing agent.

Special Fire Fighting Procedures: This product contains solvents that are dangerous fire and explosion hazards when exposed to heat or flame. Fire fighters should wear self-contained breathing apparatus and full protective clothing with a full face piece operated in the positive pressure demand mode.

Unusual Fire And Explosion Hazards: Extremely flammable. Store and use away from all sources of heat, flame, or sparks. Do not smoke while applying. Vapors are heavier than air and may travel along ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at location distant from material handling point and flash back.

SECTION V REACTIVITY DATA

Chemical Stability: Stable Hazardous Polymerization: Will not occur.
Conditions to Avoid: Heat, sparks, and flames; ignition sources.
Incompatibility (Materials to Avoid): Strong oxidizing agents, acids, bases.
Hazardous Decomposition Products: Toxic gases or vapors such as carbon monoxide, carbon dioxide, or oxides of nitrogen may be released in a fire.

=====SECTION VI TOXICOLOGICAL PROPERTIES=====

**Route of Entry:** Skin Contact X Skin Absorption X Eye Contact X Inhalation X Ingestion X

**Effects of Acute Exposure To Product:** Skin, eye, nose and throat irritation on short term exposure to liquid or vapor. Overexposure may result in headache, dizziness, fatigue, nausea, possible unconsciousness, even asphyxiation. Ingestion can cause gastrointestinal irritation. Aspiration into lungs can cause chemical pneumonitis which can be fatal.

**Effects of Chronic Exposure:** Moderate irritation of skin, eyes, ad mucous membranes of upper respiratory tract on prolonged/repeated contact. Dermatitis and defatting of the skin. Chronic exposure may cause reversible liver and kidney injury. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Repeated exposure to Toluene has been associated with high frequency hearing loss based on animal tests.

Exposure Limits	Irritancy of Product	Sensitizations To Product	Carcinogenicity	
OSHA PEL-TWA Toluene 100 ppm	Eye, nose, and throat irritation at or above PEL of 100 ppm	None known	No evidence	
Teratogenicity	Reproductive Toxicity	Mutagenicity	Synergistic Products	Tumorigenicity
Some evidence in animal exposure to Toluene.	Some evidence in animal exposure to Toluene.	Some evidence in animal exposure to Toluene.	None Known	No evidence

=====SECTION VII PREVENTIVE MEASURES=====

**PERSONAL PROTECTIVE EQUIPMENT:**

**Gloves:** Hycron® or permeation resistant gloves recommended.

**Respirator:** A NIOSH approved respirator must be used if vapor concentration is 100 ppm or above.

**Eye:** Glasses or goggles recommended.

**Footwear:** Industrial shoes to protect feet from adhesive contact.

**Clothing:** Long sleeves, long trousers to protect skin from adhesive contact.

**Other:** Protective skin creams or emollients useful.

**Engineering Controls (EG., Ventilation, Enclosed Process):** Do not use in enclosed areas without proper explosion-proof ventilation. General and local exhaust ventilation must be sufficient to control vapor concentrations and keep the PEL below 100 ppm.

**Leak or Spill Procedure:** Remove all sources of ignition. Avoid breathing vapors. Use self-contained breathing apparatus in enclosed area. Ventilate area. Contain and remove with inert absorbent materials and non-sparking tools.

**Waste Disposal:** Dispose of in accordance with all local, state, and federal regulations.

**Handling Procedures And Equipment:** Use away from all sources of heat, flame, or sparks. Do not smoke while using. Handling equipment must be grounded to prevent sparking. Handle with non-sparking tools. Wash with soap and water before eating or drinking. Launder contaminated clothing. KEEP OUT OF REACH OF CHILDREN.

**Storage Requirements:** Keep containers cool, dry, and store away from all sources of heat, flame, and sparks. Keep containers tightly closed and store with adequate ventilation. Do not pressurize, cut, weld, or grind the containers or empty containers which may contain residual product and solvent vapors that may ignite explosively.

**Special Shipping Information:** A red caution label is required. DOT Classification: Adhesives, 3, UN 1133, PGII.

=====SECTION VIII FIRST AND MEASURES=====

**Specific Measures:** Whenever possible, remove the worker from the source of contamination.

**Eye Contact:** Immediately flush eyes with running water for at least 15 minutes. Get medical attention.

**Skin Contact:** Immediately flush skin with running water and remove contaminated clothing. Wash exposed area with soap and water. Get medical attention.

**Inhalation:** Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention immediately.

**Ingestion:** Do not induce vomiting. Get medical attention immediately.

Respiratory symptoms associated with pre-existing lung disorders and pre-existing heart disorders may be aggravated by exposure to this material.

=====SECTION IX ADDITIONAL REGULATORY INFORMATION=====

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 and of 40 CFR 372: TOLUENE, CAS # 108-88-3, 55.7%

**California Proposition 65**

This product contains the following chemicals (s) known to the state of California to cause birth defects or other reproductive harm: TOLUENE

=====SECTION X PREPARATION INFORMATION=====

**Disclaimer:** The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.