MATERIAL SAFETY DATA SHEET

1.CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PU 2-COMPONENT DRY LAMINATION PASTE CURING AGENT
TRADE NAME : AEDLD
Manufacturer/supplier: Company Name: NAN YA PLASTICS CORPORATION Address: No.6 KONG YEH 1st ROAD 832 LIN YUAN INDUSTRISL ZONE, KAOHSIUNG, TAIWAN R.O.C. Emergency Telephone / Fax No.: 886-7-6419911-683 / 886-7-6432546

2.COMPOSITION/INFORMATION ON INGREDIENTS

MIX SUBSTANCE			
Component (s)	Catalogue of Hazards	C. A. S. No.	Percentage
NCO-terminated urethane prepolymer			68.0%~78.0%
ETHYL ACETATE	3 flammable	141-78-6	22.0%~32.0%
MDI	R-PHASES	101-68-8	＜1.5%
TDI	R-PHRASES	26471-62-5	＜0.5%

3. HAZARDOUS IDENTIFICATION

Warning :	Protective Measures :
○Irritation to the skin, eyes and respiratory tract. ○May cause sensitization by inhalation. ○In hyperreactive or hypersensitive people very low concentration may lead to bronchoconstriction (asthmatic signs and symptoms).	○Avoid contact with the skin, eyes and wear proper skin protection
Critical Hazards: Flammable liquid and vapor. Vapor may ignite explosively.	
Class / Division: 3 FLAMMABLE	

4. FIRST AID MEASURES

Inhalation: remove person to fresh air. if breathing is difficult , provide oxygen and seek medical attention
Skin Contact: Take off the clothing and wash with water and soap. Get medical attention if necessary.
Eye contact: Immediately flush eyes with a large amount of water for at least 15 minutes, and get medical attention.
Ingestion: Do not induce vomiting. Transfer to medical facility for gastric lavage.
Suck or taking will cause toxicity.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA/ FIRE FIGHTING PROCEDURES
Use the following extinguishing media when fighting fires involving this material: **water fog, foam, dry chemical power, or carbon dioxide.**
Special risk: Explosive when organic vapor heated.

Special extinction procedures:

1.Fire involving should be fought upwind and wear a suitable set of protective clothing.
2.Water spray may be used to cool fire exposed containers, but the spray may not extinguish fire.

Firefighters should wear a self-contained breathing apparatus and breathe the vapor.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE

Put on protective equipment, remove source of fire and ensure adequate ventilation. Remove unnecessary personnel from the area. Avoid inhalation of the vapors and contact with the skin. Avoid leakage to the drainage system, scoop up and place in an open top drum. And eliminate all sources by absorption on paper, cloth towels or sand. And treat with neutralizing solution: mixture of water(90~95%), concentrated ammonia(3~8%) and detergent(2%) . Wash down the spill area by water. Do not seal waste container to prevent from blowing up by evolution of CO_2.

PERSONAL PROTECTIVE EQUIPMENT

Wear chemical splash goggles, impervious body covering and rubber gloves. Wear an air-purifying respirator equipped with cartridges for protection against organic vapors.

CONTAINMENT AND CLEANING:

1.Promply remove ignition sources, both actual and potential.
2.Small spills may be absorbed with dry earth or sand, or wiped off with rag, and placed into a chemical waste containers.
3.In case of large spills, dike with earth or sand to guide the flow to a safe area for collection and recovery
4.To burned in the incinerator.
5.To bury the solid wastes in the qualified waste yard.
6.To freight with the qualified transportation.

7. HANDING AND STORAGE

Handing: 1.When using do not wear contact lens. Always wear protect equipments.
2.After handling wash hands thoroughly and change the contaminated clothing.
3.Pay attention to the management of empty containers as well.
4.Prevent generation of static electricity. Clothing and work shoes must be electroconductive.
5.Ground and bond containers when transferring material.
6.Wear rubber gloves, protective mask

Storage: 1.Store in a ventilated area.
2.The product content low flash point evaporated solvent, when it is applied, fire is prohibited.
3.Electrical equipment must be of explosion-proof construction and ground.
4.Keep away from ignition sources, high temperatures as boiler, and oxidizing materials.
5.Avoid contact with moisture by sealing the container by dry air or nitrogen gas, when the container was opened once.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS
Ethyl acetate: ACGIH(1997) TLV-TWA 400ppm OSHA (1997) PEL-TWA 400ppm MDI : ACGIH(1997) TLV-TWA 0.005ppm OSHA (1997) PEL-C 0.02ppm TDI : ACGIH(1997) TLV-TWA 0.005ppm TLV-STEL 0.02 ppm OSHA (1997) PEL-C 0.02ppm
ENGINEERING CONTROL MEASURES
Use local exhaust ventilation if material is heated or missing.
PERSONAL PROTECTION EQUIPMENT:
Respiratory Protection: NIOSH approved one
Hand Protection: Impermeable gloves
Eye Protection: Use safety chemical goggles
Skin & Body Protection: Use Anti-splash Clothing
Industrial Hygiene: 1. To install emergency eye wash fountains and shower at the potential exposed zone. 2. Thoroughly wash the polluted clothing before next use. 3. Should thoroughly wash hands with soap and water before eating, using tobacco products, using toilet facilities. 4. Always take shower with clean water and soap after work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid	Color: pale yellow clear liquid	Odor: fragrant odour
P.H. Value:	Boiling Range: 77℃	Decomposition Temperature:
Flash Point: -4.4℃ for ethyl acetate	Explosion Limits: 2 ~11.5% by vol for ethyl acetate	Solubility in water: insoluble
Specific Gravity: 0.9	Vapor Pressure: 3 for ethyl acetate	Melting point:

10. STABILITY AND REACTIVITY

Chemical Stability: unstable
Possible hazardous reaction under extreme conditions: may occur. Must avoid contact with amines, alcohols and water.
Conditions to avoid : heat
Decomposition: Smog, CO, CO_2, NOx
Incompatibility with other materials: Amine, alcohols, acid, bases. NCO-containing urethane prepolymer with water to generate CO_2

11. TOXICOLOGICAL INFORMATION

Ingestion: low order of acute toxicity, but has corrosive action on the esophagus and stomach lining. Eye : in the form of liquid, severe irritant and might cause corneal damage. Vapour of ethyl acetate irritate eye tissue.

Skin : prolonged or repeated skin contact may cause dermatitis. Inhalation: Vapour irritate respiratory tract and may cause asthma. Allergy like asthmatic may occur in susceptible subjects. LC50(rat)=16,000ppm/8H for ethyl acetate.

12. ECOLOGICAL INFORMATION

BIODEGRADATION: not appreciably toxic to fish, bacteria and Daphnia.
ACCUMULATIVENESS: N/A

13. DISPOSAL CONSIDERATION

Comply with all national or local recommendations and regulations.

14. TRANSPORT INFORMATION

International Transport Regulation: this product is dangerous goods in IMDG(sea transport) status and ICAO(air transport) status.	UN No. : 1133
Local Transport Regulation: N/A	Hazard class: 3.2
Special Transportation & Consideration: Avoid transported with incompatible goods.	

15. REGULATORY INFORMATION

Comply with each country's regulation.

16. Other Information

The data here is based on our current knowledge and experience. The data can be revised by new information. The purpose of this Safety Data Sheet is to describe the products from the point of view of safety requirements. Therefore it should not be construed as guaranteeing specific properties.
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