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A H D, Inc.

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MATERIAL SAFETY DATA SHEET

HANDIBOND THIN, MEDIUM, THICK, SCREEN PRINTING, RUBBER TOUGHENED SERIES

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Type	Ethyl Cyanoacrylate
Company Name	A H D, Inc.
Address	1110 University Avenue, Suite 511 Honolulu, HI 96826
Emergency Telephone Number	(808)951-7577, (888)288-1811 (24 hr.)

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS NUMBER	%
Ethyl Cyanoacrylate	7085-85-0	80 ~ 99
Polymethyl Methacrylate (PMMA)	9011-14-7	0 ~ 30
Hydroquinone	123-31-9	0 ~ 0.5

Ingredients which have exposure limits

Exposure Limits	(TWA)	ACGIH	OSHA	OTHER
Ingredients	(TLV)	(PEL)		
Ethyl Cyanoacrylate	0.2 ppm TWA	None	None	
Hydroquinone	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	4 mg/m ³ STEL
Exposure Limits	(STEL)	ACGIH	OSHA	
Ingredients	(TLV)	(PEL)		

3. HAZARDS IDENTIFICATION

Toxicity	Bonds skin rapidly and strongly Skin and eye irritant Estimated oral LD50 more than 5000 mg/kg Estimated dermal LD50 more than 2000 mg/kg
Signs and Symptoms of Exposure	Vapor is irritating on eyes and mucous membranes above TLV. Prolonged and repeated overexposure to vapors may produce symptoms of non-allergic asthma in sensitive individuals.

4. FIRST AID MEASURES

Ingestion	Ingestion is not likely. See supplemental page for emergency procedures.
Inhalation	Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact	Soak in warm water. See supplemental page for emergency procedures.
Eye contact	Flush with water. See supplemental page for emergency procedures.

5. FIRE FIGHTING MEASURES

Flash Point	80°C (176°F)	Method	Tag Closed cup.
Recommended Extinguishing Agents	Carbon dioxide, foam, dry chemical		
Special Fire Fighting Procedures	Not available		
Hazardous Products formed by Fire or Thermal Decamp Irritation organic fragments			
Unusual Fire or Explosion Hazards	None		
Explosive Limits			
(% by volume in air) Lower	Not available		
(% by volume in air) Upper	Not available		

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak	Flood with water to polymerize. Soak up with an inert absorbent.
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7. HANDLING AND STORAGE

Safe Storage	Store below 25° C (77° F)
Handling	Avoid contact with skin and eyes. Avoid breathing vapor.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes	Safety glasses or goggles
Skin	PE gloves and aprons. Do not use cotton. See supplemental page for additional information.
Ventilation	Positive downdraft exhaust ventilation should be provided to maintain vapor concentration below TLV.
Respiratory	Not available See Section 2 for Exposure Limits

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear liquid
Odor	Sharp, irritation
Boiling Point	60~70 ° C (140 ° F ~ 158 ° F) / 3~5 mm Hg.
PH	Does not apply
Solubility in Water	Polymerized by water
Specific Gravity	1.05
Volatile Organic Compound (EPA Method 24)	98.8%; 1037.4g/l.
Vapor Pressure	Less than 0.2 mm
Vapor Density	Approximately 3
Evaporation Rate(Ether-1)	Not available

10. STABILITY AND REACTIVITY

Stability	Stable
Hazardous Polymerization	Will not occur
Incompatibility	Polymerized by contact with Amines, alkalis
Conditions to Avoid	Not available
Hazardous Decomposition Products (non-thermal)	None

11. OTHER INFORMATION

Estimated NFPA [®] Code	Health Hazard	2
	Fire Hazard	2
	Reactivity Hazard	1
	Specific Hazard	Does not apply
Estimated HMIS [®] Code	Health Hazard	2
	Flammability Hazard	2
	Reactivity Hazards	1
	Personal Protection	See Section 8

12. OTHER INFORMATION

Cyanoacrylate adhesive is a very fast setting and strong adhesive. It bonds human tissue including skin in seconds. Experience had shown that accidents due to cyanoacrylate are handled best by passive, non-surgical first aid. Treatment of specific types of accidents is given below.

SKIN CONTACT

Wash skin with warm, soap water or Acetone

EYE CONTACT

Immediately flush eyes with plenty water and call a physician. The eye will open without further action, typically in 1-4 days. There will be no residual damage. Do not try to open the eyes by manipulation.

MOUTH

If lips are accidentally stuck together, apply lots of warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips with direct opposing action. It is almost impossible to swallow cyanoacrylate. The adhesive solidifies and adheres in the mouth. Saliva will lift the adhesive in one half to two days. In case a lump forms in the mouth, position the patient to prevent ingestion of the lump when it detaches.

BURNS

Cyanoacrylates give off heat on solidification. In rare cases, a large drop will increase in temperature enough to cause a burn. Burns should be treated normally after the lump of Cyanoacrylate is released from the issue as described above.

SURGERY

It should never be necessary to use such a drastic method to separate accidentally bonded skin.

ACCORDING IATA ICAO REGULATION: NOT RESTRICTED