

# K & R International

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## MATERIAL SAFETY DATA SHEET

**Item No. S-305, S-310, S-320, S-380, I-16700**

### 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Type: Cyanoacrylate Ester

### 2 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS No.	%
Poly(methyl methacrylate)	9011-14-7	20-30
Ethyl Cyanoacrylate	7085-85-0	70-80
HYDROQUINONE	123-31-9	0-0.5

Ingredients, which have exposure limits

Exposure Limits Ingredients	(TWA) (TLV)	ACGIH (PEL)	OSHA	OTHER
Ethyl Cyanoacrylate	0.2ppmTWA	None	None	
HYDROQUINONE	2mg/m3TWA	2mg/m3TWA	2mg/m3TWA	4mg/m3 STEL
Exposure Limits Ingredients	(STEL) (TLV)	AGGIH (PEL)	OSHA	

### 3 HAZARDS IDENTIFICATION

Toxicity: Bonds skin rapidly and strongly  
Skin and eye irritant  
Estimated oral LD50 more than 5000mg/kg  
Estimated dermal LD50 more than 2000mg/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 pager for emergency procedures.

Eye Contact: Flush with water. See supplemental page for emergency procedure

## **5 FIRE FIGHTING MEASURES**

Flash Point: 180 F

Method: Tag Closed Cup

Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical

Special Firefighting Procedures: Not available

Hazardous Products formed by fire or thermal decamp: Irritating organic fragments.

Unusual Fire or Explosion Hazards: None

Explosive Limits (% by volume in air) Lower : Not available

Explosive Limits (% by volume in air) Upper : Not available

## **6 ACCIDENTAL RELEASE MEASURES**

Step to be taken in case of spill or leak: Flood with water to polymerize. Soak up with an inert Absorbent.

## **7 HANDLING AND STORAGE**

Safe Storage; Store below 70F

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 section 12 for additional information

Ventilation: Positive down-draft 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: 140-160 F @ 3-5 mmHg

PH: Does not apply

Solubility in Water: Polymerized by water

Specific Gravity: 1.05 @ -10 F

Vapor Pressure: Less than 0.2mm

Evaporation 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, water and alcohols

Conditions to Avoid: Not available

Hazardous Decomposition product ( 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 Hazard: 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

Remove excess monomer. Soak in warm, soapy water. The monomer will come loose from the skin Several hours. cured monomer does not present a health hazard even when bonded to the skin. Avoid Contact with clothes, fabrics, rags, or tissue. Contact with these materials may cause polymerization. The polymerization of large amounts of monomer will generate heat causing smoke, skin burns, and Strong, irritating vapors, Wear PE gloves and apron when handling large amounts of adhesive.

### SKIN ADHESION

First, immerse the bonded surfaces in warm, soapy water. Peel or roll the surfaces apart with the Aid of a blunt edge, e.g.a spatula or a teaspoon handle: then remove adhesive form the skin with Soap and water. Do not try to pull surfaces apart with a direct opposing action.

### EYELID TO EYELID OR EYEBALL ADHESION

In the event that eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm Water and apply a gauze patch. The eye will open without further action, typically in 1-4days. There will be no residual damage. Do not try to open the eyes by manipulation.

### ADHESIVE ON THE EYEBALL

Cyanoacrylate introduced into the eyes will attach itself to the eye protein and well disassociate From it over intermittent periods, generally covering several hours. This will cause periods of Weeping until clearance is achieved. During the period of contamination, double vision may be Experienced together with a lachrymatory effect, And it is important to understand the cause and

Realize that disassociation will normally occur within a matter of hours, Even with gross contamination.

## **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.