MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET 7S274
5E204
LOCTITE CORPORATION 01/09/95
ROCKY HILL, CONNECTICUT 06067
EMERGENCY PHONE: (203) 571-5100

Super Bonder(R) Gluematic(R) Pen
49595 - 5E204

I. PRODUCT IDENTIFICATION

Product Name:	Super Bonder(R) Gluematic(R) Pen
Item No.:	49595 - 5E204
Product Type:	Cyanoacrylate Ester Adhesive
Formula No.:	Does not apply

II. COMPOSITION

Ingredients	CAS No.	%
Ethyl cyanoacrylate	7085-85-0	95-100
Poly (methyl methacrylate)	9011-14-7	3-5
HYDROQUINONE	123-31-9	0.1-0.5

III. CHEMICAL AND PHYSICAL PROPERTIES

Vapor Pressure:	Less than 0.2mm at 75½F
Vapor Density:	Approximately 3
Solubility in Water:	Polymerized
Specific Gravity:	1.05 at 75½F
Boiling Point:	More than 300½F
Volatile Organic Compound (EPA Method 24)	94.0%; 987 g/l
Evaporation Rate (Ether = 1)	Not available
pH:	Not Applicable
Appearance:	Clear liquid
Odor:	Sharp, irritating

IV. FLAMMABILITY AND EXPLOSIVE PROPERTIES

Flash Point: 150-200½F Method: Tag Closed Cup
Estimated NFPA Code:
Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 2
Specific Hazard: No water
Estimated HMIS Code:
Health Hazard: 2
Flammability Hazard: 2
Reactivity Hazard: 2
Personal Protection: See Section X.
Explosive Limits:
(% by volume in air)Lower Not Applicable
(% by volume in air)Upper Not Applicable
Recommended
Extinguishing Agents: Carbon dioxide, Foam, Dry Chemical
Hazardous Products Formed
by Fire or Thermal Decomp Irritating organic fragments
Unusual Fire or
Explosion Hazards: None
Compressed Gases: None
Pressure at Room Temp.: Does not apply

V. SPILL OR LEAK AND DISPOSAL PROCEDURES

Steps to be taken in case
of spill or leak: Flood with water to polymerize. Soak up with an inert absorbent.
Recommended methods
of disposal: Polymerize as above.
Incinerate following EPA and local regulations.

VI. STORAGE AND HANDLING PROCEDURES

Safe Storage: Store below 75 deg. F.
Handling: Avoid contact with skin and eyes. Avoid breathing vapors.

VII. SHIPPING REGULATIONS

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Unrestricted (Not more than 450 liters); Combustible liquids, n.o.s. (Cyanoacrylate ester) (More than 450 liters)
Hazard Class or
Division: Unrestricted (Not more than 450 liters)
Combustible liquid (More than 450 liters)
Identification Number: None (Not more than 450 liters); NA 1993 (More than 450 liters)
Marine Pollutant: None
IATA
Proper Shipping Name: Unrestricted (Not more than one pint); Other regulated substances (More than one pint)
Class or Division: Unrestricted (Not more than one pint); Class 9 (More than one pint)
UN or ID Number: None (Not more than one pint) ID 8027 (More than one pint)

VIII. REACTIVITY DATA

Stability: Stable
Hazardous Polymerization: Will not occur.
Hazardous Decomposition
Products (non-thermal): None
Incompatibility: Polymerized by contact with water, alcohols, amines, alkalies.

IX. EMERGENCY TREATMENT PROCEDURES

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.

X. PERSONAL PROTECTION

Eyes: Safety glasses or goggles mandatory.
Skin: Nitrile or polyethylene gloves and aprons. Do not use cotton.
See supplemental page for additional information.
Ventilation: Positive down-draft exhaust ventilation should be provided to maintain vapor concentration below TLV.

XI. HEALTH HAZARD DATA

Toxicity: BONDS SKIN RAPIDLY AND STRONGLY
SKIN AND EYE IRRITANT
LOW TOXICITY BY INGESTION
INFORMATION FOR FIRST AID AND CASUALTY ON TREATMENT FOR 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. SPATULA OR TEASPOON HANDLE; THEN REMOVE ADHESIVE FROM THE SKIN WITH SOAP AND WATER. DO NOT TRY AND 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 SUPPLY A GAUZE PATCH. THE EYE WILL OPEN WITHOUT FURTHER ACTION. DO NOT TRY TO OPEN THE EYES BY MANIPULATION. ADHESIVE ON THE EYEBALL: CYANOACRYLATES INTRODUCED INTO THE EYES WILL ATTACH ITSELF TO THE EYE PROTEIN AND WILL DISSOCIATE FROM IT OVER INTERMITTENT PERIODS, GENERALLY COVERING SEVERAL HOURS.

Primary Routes of Entry: SKIN
Signs and Symptoms
of Exposure: Vapor is irritating to eyes and mucous membranes above TLV.
Existing Conditions
Aggravated by Exposure: None known

Exposure Limits (TWA) Ingredients	ACGIH (TLV)	OSHA (PEL)	OTHER
Ethyl cyanoacrylate	None	None	2 ppm TWA
HYDROQUINONE	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWA 4 mg/m3STEL

Exposure Limits (STEL) Ingredients	ACGIH (TLV)	OSHA (PEL)

Ingredients for which no Exposure Limits have been established are not listed above.

Literature Referenced Ingredients	Target Organ and Other Health Effects	NTP	IARC	OSHA
Ethyl cyanoacrylate	LUN SKI	NO	NO	NO
Poly (methyl methacrylate)	No Data	NO	N/A	NO
HYDROQUINONE	BLO IRR LIV MUT NER REP	NO	N/A	NO

Abbreviations
N/A Not Applicable
IRR Irritant
LUN Lung
NER Nervous System
SKI Skin
BLO Blood
LIV Liver
MUT Mutagen
REP Reproductive

XII. PREPARATION INFORMATION

Prepared By: Stephen Repetto
Title: Research Chemist, Environmental Health & Safety
Company: Loctite Corp. 1001 Tr Br Cr, Rocky Hill CT 06067
(24hr.) Phone: (203) 571-5100
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Supplement

INFORMATION FOR FIRST AID AND CASUALTY ON TREATMENT FOR ADHESION OF HUMAN SKIN TO ITSELF IF CAUSED BY CYANOACRYLATE ADHESIVES

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

SKIN CONTACT
Remove excess adhesive. Soak in warm, soapy water. The adhesive will come loose from the skin in several hours. Cured adhesive 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 adhesive will generate heat causing smoke, skin burns, and strong, irritating vapors. Wear nitrile or polyethylene 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 from 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 1-4 days. 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 will 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 lu

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 tissue as described above.

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