

Health	1
Flammability	2
Reactivity	1
Personal Protection	*

# BOWMAN DISTRIBUTION MATERIAL SAFETY DATA SHEET

Health	1
Flammability	2
Reactivity	1
Specific Hazard	

HMS Ratings  
\*See Section VIII

NFPA Ratings

## SECTION I

PRODUCT NAME <b>FSA ADHESIVE</b>		BOWMAN PART NO. <b>21990, 21991 (page 1 of 2)</b>
SUPPLIER <b>Bowman Distribution, Barnes Group Inc.</b>	INFORMATION TELEPHONE NO. <b>(216) 416-7200</b>	24 HR. EMERGENCY TELEPHONE NO. <b>(303) 623-5716</b>
ADDRESS <b>1301 E. 9th St., Suite 700, Cleveland, Ohio 44114-1824</b>		DATE <b>7/29/98</b>
HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS, HAZARD ID NO. (49 CFR 172.101) <b>DOT: Not Regulated. ORM-A: Greater than 1-Pt. N.O.S. IATA: Not Regulated.</b>		
ADDITIONAL HAZARD CLASSES (as applicable) <b>None</b>		
CHEMICAL FAMILY <b>Ethyl-2-Cyanoacrylate Ester</b>	FORMULA <b>Proprietary</b>	

## SECTION II - HAZARDOUS INGREDIENTS

CAS REGISTRY NUMBER	%W	%V	CHEMICAL NAME(S)	OSHA PEL (PPM)	ACGIH TLV (PPM)	Other Limits (PPM)	Listed as Carcinogen NTP, IARC or OSHA 1910(z) (specify)
7085-85-0	60-70		Ethyl-2-Cyanoacrylate	N.E.	N.E.	2 ppm TWA	NO
9011-14-7	5-15		Poly (Methyl Methacrylate)	N.E.	N.E.	N.E.	NO
123-31-9	0-1		*Hydroquinone	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	N.E.	NO

\*ALL CHEMICAL COMPOUNDS MARKED WITH AN ASTERISK (\*) ARE TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 AND 40 CFR PART 372.

## SECTION III - PHYSICAL DATA

BOILING POINT <b>149 °F</b> _____ °C	SPECIFIC GRAVITY (H <sub>2</sub> O = 1) <b>1.06</b>	MAXIMUM PERCENT VOC BY WEIGHT (%) 85 % Method used EPA Method 24
VAPOR PRESSURE @ _____ °F <b>20 °C</b> <input checked="" type="checkbox"/> mm Hg <input type="checkbox"/> psi	PERCENT VOLATILE BY VOLUME (%) <b>N.D.</b>	VISCOSITY <b>100 centipoise</b>
VAPOR DENSITY (AIR = 1) <b>nil-N.E.</b>	EVAPORATION RATE (Ether = 1) <b>nil-N.E.</b>	MELTING POINT <b>N.E.</b>
SOLUBILITY IN WATER <b>Insoluble, material reacts to harden mass for non-hazardous waste.</b>	MATERIAL IS: <b>medium viscosity liquid</b>	
APPEARANCE AND ODOR <b>Transparent water-white to straw colored liquid with stimulative odor.</b>		

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT <b>176 °F</b> _____ °C	method used <b>TCC</b>	FLAMMABLE LIMITS <b>N.E.</b>	LEL <b>N.E.</b>	UEL <b>N.E.</b>
EXTINGUISHING MEDIA <b>Flush with large amounts of water or a dry-chemical extinguisher.</b>				
SPECIAL FIRE FIGHTING PROCEDURES <b>Fumes may be irritating if not burning and require air supply with goggles while applying large amounts of water or dry-chemical extinguisher.</b>				
UNUSUAL FIRE AND EXPLOSION HAZARDS <b>None. Combustible requiring the above procedures.</b>				

## SECTION V - HEALTH HAZARD DATA

HEALTH HAZARDS (ACUTE AND CHRONIC – INCLUDE TARGET ORGAN EFFECTS) <b>Acute - Irritates eyes, mucous membranes. Chronic - No residual effects of acute properties. Carcinogenicity: NTP: No, IARC</b> <b>Monograph's: No, OSHA Regulated: No.</b>	
CONDITIONS TO AVOID <b>Avoid breathing vapor and contact with eyes and skin.</b>	
SIGNS AND SYMPTOMS OF OVEREXPOSURE <b>See Emergency and First Aid Procedures.</b>	
PRIMARY ROUTES OF ENTRY Inhalation <input checked="" type="checkbox"/> Skin Contact <input type="checkbox"/> Other (specify) <input type="checkbox"/> Ingestion: LD50=12.2 cc/kg (mice)	
EMERGENCY AND FIRST AID PROCEDURES Eye contact - Tearing from eye irritation. Remove to fresh air. Flush areas of contact with water. Adhesive will disassociate from eye/eyelids over time, usually within several hours. Temporary weeping of eyes/double vision may be experienced until clearance is achieved. Skin contact - Immerse bonded areas in warm, soapy water. Peel or roll skin apart. Remove cured adhesive with several applications of warm, soapy water. Prolonged or repeated contact at elevated levels may cause dermatitis in sensitive individuals. Inhalation - Irritation of mucous membranes/coughing. Remove to fresh air. Prolonged or repeated exposure at elevated levels may produce allergic reactions with asthma-like symptoms in sensitive individuals. Ingestion - Lips may become stuck together; apply copious amounts of warm water & encourage wetting/pressure from saliva inside mouth. Peel or roll (do not pull) lips apart. It is almost impossible to swallow cyanoacrylate as adhesive solidifies upon contact with saliva & may adhere to inside of mouth. Saliva will lift adhesive in 1-2 days. Avoid swallowing adhesive after detachments.	
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE <b>Pre-existing eye, skin, and respiratory disorders may be aggravated by exposure.</b>	

## SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID <b>Excessive heat above 176° F, moisture and alkalines.</b>
	STABLE	X	
INCOMPATIBILITY (materials to avoid) <b>Polymerized by water, alcohols, amines, alkaline materials, and direct UV.</b>			
HAZARDOUS DECOMPOSITION PRODUCTS: <b>Combustible by-products of carbon monoxide/dioxide.</b>			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID <b>Stable up to 122 F. Store in cool, dry locations.</b>
	WILL NOT OCCUR	X	

## SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED <b>Polymerize with water. Solid material may be scraped from surface.</b>	
WASTE DISPOSAL METHOD <b>Incinerate solid combustible waste or dump as chemical waste according to local, state and federal regulations.</b>	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs.) <b>N.A.</b>	
RCRA HAZARDOUS WASTE NO. (40 CFR 261.33) <b>N.A.</b>	
VOLATILE ORGANIC COMPOUND (VOC) EPA Method 24	<input type="checkbox"/> Theoretical _____ g/Liter <input checked="" type="checkbox"/> Analytical <b>896</b> g/Liter
<b>85 % by wt.</b>	

## SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) <b>A NIOSH-approved organic vapor canister may be used to maintain vapor concentration below TLV.</b>		
VENTILATION	LOCAL EXHAUST (specify rate) <b>To maintain vapor concentration below TLV.</b>	SPECIAL <b>Normally not required.</b>
	MECHANICAL (general) (specify rate) <b>Large amounts used to 2ppm.</b>	OTHER <b>Normally not required.</b>
PROTECTIVE GLOVES (specify type) <b>Vinyl (polyethylene) non-sticking gloves.</b>	EYE PROTECTION (specify type) <b>Safety glasses with side shield.</b>	
OTHER PROTECTIVE EQUIPMENT <b>Rubber apron to protect clothing.</b>	WORK/HYGIENIC PRACTICES <b>Soap and water helps remove adhesive from skin.</b>	

## SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING <b>Avoid moisture, direct UV-sunlight and do not store above 25° C. Keep containers tightly closed when not in use. Ideal storage: 5-10° C.</b>	
OTHER PRECAUTIONS <b>Avoid breathing vapor, contact with eyes/skin. Do not store at - 5° C which freezes product to useless state. Product not damaged by freezing.</b>	