

SAFETY DATA SHEET



Date Prepared : 10/10/2014
MSDS No : MRO Solution 4 - GHS
Date-Revised : 5/13/2015
Revision No : 8

1. PRODUCT AND COMPANY IDENTIFICATION

GENERAL USE: Cyanoacrylate adhesive product.
PRODUCT DESCRIPTION: MRO Solution 4 - 70116, 70117

MANUFACTURER

MRO Solutions L.L.C.
5645 West Howard Street
Niles, IL 60714
Service Number: (847) 588-2480

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC: (800) 424-9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Eye Irritation, Category 2A
Skin Irritation, Category 2
Target Organ Toxicity (Single exposure), Category 3
Skin Sensitization, Category 1

GHS LABEL ELEMENTS



Exclamation
mark

SIGNAL WORD: WARNING

HAZARD STATEMENTS

H315: Causes skin irritation.
H319: Causes serious eye irritation.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.

PRECAUTIONARY STATEMENT(S)

Prevention:

P264: Wash skin and hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P271: Use only outdoors or in a well-ventilated area.

SAFETY DATA SHEET



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P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Response:

P370: In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention.

P313: Get medical advice/attention.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

Disposal:

7944L5O1: Dispose of in a manner consistent with federal, state, and local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
ETHYL-2-CYANOACRYLATE	85 - 100	7085-85-0
Polymethyl methacrylate	10 - 30	9011-14-7

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN: Wash with soap and water. Peel or roll skin apart.

INGESTION: Peel or roll skin apart. Adhesive becomes solid in contact with saliva and may adhere to inside of mouth. Saliva will lift adhesive in 1-2 days. Avoid swallowing solid adhesive after detachment. Not a toxic product.

INHALATION: Remove to fresh air. Prolonged or repeated elevated exposure may cause allergic reactions with asthma-like symptoms in sensitive individuals.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Causes serious eye irritation. Will bond eyelids. Will cause excessive tearing.

SKIN: Bonds skin in seconds. May cause skin irritation. May cause sensitization by skin contact. Cyanoacrylates generate heat on polymerization, so very large amounts will burn the skin.

INGESTION: Adhesive becomes solid in contact with saliva and may adhere to inside of mouth. Saliva will lift adhesive in 1-2 days. Not a toxic product.

INHALATION: Prolonged or excessive inhalation may cause respiratory tract irritation.

ACUTE TOXICITY: Avoid exposure to vapor concentration in confined areas.

CHRONIC EFFECTS: Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

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5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: GHS Flammable Liquid, Category 4

GENERAL HAZARD: Combustible liquid and vapor. Product polymerized to solid by water.

EXTINGUISHING MEDIA: Use dry chemical extinguisher or flush with large amounts of water.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustible by-products of carbon monoxide/dioxide.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Polymerize with water. Solid material may be scraped from surface.

LARGE SPILL: Polymerize with water. Increase ventilation to area. Solid material may be scraped from surface.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: None known.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Use with adequate ventilation. Avoid contact with eyes, skin and clothing.

HANDLING: Avoid breathing (dust, vapor, mist, gas). Avoid contact with skin, eyes and clothing. Keep container closed when not in use.

STORAGE: Store in a cool place in original container and protect from sunlight. Keep away from sources of ignition.

STORAGE TEMPERATURE: Ideal storage: 41-50F (5-10C)

SHELF LIFE: One year from the date of shipment from Pacer Technology, unless otherwise noted.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
ETHYL-2-CYANOACRYLATE	TWA	[1]	[1]	0.2	1.0	0.2 ppm	
OSHA TABLE COMMENTS:							
1. NL = Not Listed							

ENGINEERING CONTROLS: Use only in a well ventilated area. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

SKIN: Use Nitrile gloves and aprons to prevent contact. Do not use PVC, Nylon or Cotton materials.

SAFETY DATA SHEET



Date Prepared : 10/10/2014
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RESPIRATORY: Use only in a well-ventilated area. In case of insufficient ventilation, wear suitable respiratory equipment.
 Recommended: Full-face NIOSH-approved respirator with organic vapor cartridge.

WORK HYGIENIC PRACTICES: Avoid direct contact and breathing vapor. Use with adequate ventilation. Wash hands with soap and water after use.

OTHER USE PRECAUTIONS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Characteristic odor, intensely irritating.

ODOR THRESHOLD: Odor Threshold = 1 ppm

APPEARANCE: Transparent, colorless liquid.

pH: Not Applicable.

PERCENT VOLATILE: Not Available

FLASHPOINT AND METHOD: 86°C (186°F) to 93.4°C (200°F) TAG

CC FLAMMABLE LIMITS: Not Available

AUTOIGNITION TEMPERATURE: 485°C (905°F)

VAPOR PRESSURE: < 0.2 mm Hg

VAPOR DENSITY: Not Available

BOILING POINT: > 149°C (300°F)

FREEZING POINT: Not Available

MELTING POINT: Not Determined

THERMAL DECOMPOSITION: Not Available

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: Not Established

DENSITY: Not Available

SPECIFIC GRAVITY: 1.06 g/mL at 25°C

VISCOSITY #1: 2 to 10 Centipoise at 22°C (72°F)

MOLECULAR WEIGHT: Not Available

(VOC): < 20.000 g/L Per SCAQMD Method 316B.

COEFF. OIL/WATER: Partition coefficient (octanol/water): Not applicable.

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

CONDITIONS TO AVOID: Avoid temperatures above 176°F (80°C), moisture and alkalines.

POSSIBILITY OF HAZARDOUS REACTIONS: Possible polymerization reaction in the presence of water, amines, alkalis and alcohols.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide, Carbon Monoxide and other toxic or irritating compounds may

SAFETY DATA SHEET



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form when heated to decomposition. Oxides of nitrogen and probably hydrogen cyanide are also possible.

INCOMPATIBLE MATERIALS: Polymerized by water, alcohol, amines, alkaline materials.

COMMENTS: REACTIVITY: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)
ETHYL-2-CYANOACRYLATE	> 5000 mg/kg	> 2000 mg/kg

DERMAL LD₅₀: > 2000 mg/kg

Notes: (Estimated)

ORAL LD₅₀: > 5000 mg/kg

Notes: (Estimated)

INHALATION LC₅₀: Vapors may be irritating. Recommended TWA 0.2ppm.

EYE EFFECTS: Bonds skin and eyes in seconds. Eye irritant.

SKIN EFFECTS: Irritating to skin. May cause allergic skin reaction with prolonged contact.

CARCINOGENICITY

IARC: None known.

NTP: None known.

OSHA: None known.

SENSITIZATION: Possible skin sensitizer.

TARGET ORGANS:

<u>Ingredient</u>	<u>Health Effect/ Target Organ</u>
Ethyl cyanoacrylate	Irritant, Allergen/ Respiratory, Skin

12. ECOLOGICAL INFORMATION

GENERAL COMMENTS: None known.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of following all Local Authority requirements for disposal.

SAFETY DATA SHEET



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14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not restricted

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Not restricted

AIR (ICAO/IATA)

SHIPPING NAME: Not regulated (less than 500 mL). AVIATION REGULATED LIQUID, N.O.S. (ETHYL CYANOACRYLATE), UN3334, 9.

VESSEL (IMO/IMDG)

SHIPPING NAME: Not restricted

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not restricted

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Immediate Health, Delayed Health, Fire, Reactive.

313 REPORTABLE INGREDIENTS: None above reporting de minimus.

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: None above reporting de minimus.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
ETHYL-2-CYANOACRYLATE	7085-85-0
Polymethyl methacrylate	9011-14-7

TSCA STATUS: All components are listed on or are exempt from listing on the Toxic Substances Control Act.

CLEAN AIR ACT

40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION: Not applicable.

CALIFORNIA PROPOSITION 65: No California Proposition 65 ingredients are known to be in this product.

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



Combustible
Liquid



Toxic

Class B3 - Combustible, D2B - Irritant.

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WHMIS CLASS: B3 - combustible, D2B - irritant.

DOMESTIC SUBSTANCE LIST (INVENTORY): All components are listed on or are exempt from listing on the Domestic Substances List.

16. OTHER INFORMATION

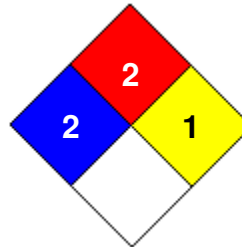
PREPARED BY: Mary Robles **Date-Revised:** 5/13/2015

REVISION SUMMARY: This MSDS replaces the 10/21/2014 MSDS. Revised: **Section 4: SIGNS AND SYMPTOMS OF OVEREXPOSURE (INGESTION, SKIN, SKIN ABSORPTION).**

HMIS RATING

HEALTH	<input type="checkbox"/>	2
FLAMMABILITY		2
PHYSICAL HAZARD		1
PERSONAL PROTECTION	<input type="checkbox"/>	

NFPA CODES



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