

# SAFETY DATA SHEET



Date Prepared : 10/10/2014  
MSDS No : MRO Solution 3 - GHS  
Date-Revised : 5/13/2015  
Revision No : 8

## 1. PRODUCT AND COMPANY IDENTIFICATION

**GENERAL USE:** Cyanoacrylate adhesive product.  
**PRODUCT DESCRIPTION:** MRO Solution 3 - 70110, 70111, 70112

### 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.

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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 <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
ETHYL-2-CYANOACRYLATE	TWA	[1]	[1]	0.2	1.0	0.2 ppm	
<b>OSHA TABLE COMMENTS:</b>							
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.

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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:** 1000 to 2000 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

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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 <sub>50</sub> (rat)	DERMAL LD <sub>50</sub> (rabbit)
ETHYL-2-CYANOACRYLATE	> 5000 mg/kg	> 2000 mg/kg

**DERMAL LD<sub>50</sub>:** > 2000 mg/kg

**Notes:** (Estimated)

**ORAL LD<sub>50</sub>:** > 5000 mg/kg

**Notes:** (Estimated)

**INHALATION LC<sub>50</sub>:** 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.

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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

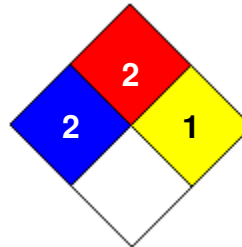
**PREPARED BY:** Mary Robles    **Date-Revised:** 5/13/2015

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

### HMIS RATING

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

### NFPA CODES



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