

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 3.1

MSDS Revision Date: 08/27/2010

1. PRODUCT IDENTIFICATION

1.1	Product Name: MACH 5
1.2	Chemical Name: CYANOACRYLATE MIXTURE
1.3	Synonyms: NA
1.4	Trade Names: NA 491, NA 492, NA 493, NA 494
1.5	Product Use: PROFESSIONAL OR SUNDRY USE ONLY
1.6	Manufacturer's Name: OPI PRODUCTS, INC.
1.7	Manufacturer's Address: 13034 SATICOY STREET, NO. HOLLYWOOD, CA 91605 USA
1.8	Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300
1.9	Business Phone: +1 (818) 759-2400 / +1 (800)-341-9999

2. HAZARD IDENTIFICATION

2.1	Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE but NOT as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia).						
2.2	Routes of Entry:	Inhalation:	YES	Absorption:	YES	Ingestion:	YES
2.3	Effects of Exposure: INGESTION: If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervous system depression. SKIN & EYES: Warning! This product will bond skin instantly. Vapor of this product may be mildly to moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering. May be irritating to skin in some sensitive individuals, especially after prolonged or repeated skin contact. INHALATION: Vapors of this product may be slightly irritating to the nose, throat and other tissues of the respiratory system. Symptoms of overexposure can include coughing, wheezing, nasal congestion, and difficulty breathing. Inhalation of vapors can cause central nervous system depression (e.g., drowsiness, dizziness, headaches, nausea). CLOTHING: May undergo rapid polymerization on contact with clothing, releasing heat. Skin burns may result.						
2.4	Symptoms of Overexposure: Symptoms of skin overexposure in some sensitive individuals may include redness, itching, and irritation of affected areas. Overexposure of vapor in eyes may cause redness, itching and watering.						
2.5	Acute Health Effects: Mild to moderate irritation to skin near affected areas. Vapor of this product may be mildly to moderately irritating to the eyes and mucous membranes. Symptoms of overexposure may include redness, itching, irritation and watering. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.						
2.6	Chronic Health Effects: None known.						
2.7	Target Organs: Eyes, skin & respiratory system.						

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not Found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used. NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

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3. COMPOSITION & INGREDIENTS

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)								
					ACGIH		NOHSC			OSHA			OTHER
					ppm		ppm			ppm			
TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH						
ETHYL-2 CYANOACRYLATE	7085-85-0	UD3330050	230-391-5	≤ 90.0	(0.2)	NE	NF	NF	NF	NE	NE	NE	
ISOPROPYL CYANOACRYLATE	10586-17-1	NA	234-188-2	≤ 10.0	NE	NE	NF	NF	NF	NE	NE	NE	

4. FIRST AID MEASURES

4.1	<p>First Aid:</p> <p>INGESTION: If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.</p> <p>SKIN: This product bonds skin immediately. Do not pull. Peel slowly using acetone, (use lukewarm water only for product removal, if skin bonding has occurred near the eyes). If irritation occurs and product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with soap and water. If irritation, redness or swelling persists, contact a physician. Immediately</p> <p>EYES: Contact a physician immediately. Do not try to open the eye. Flush with cool water for at least 15 minutes opening and closing eyelids to ensure thorough irrigation. If irritation persists, contact a physician.</p> <p>INHALATION: Remove victim to fresh air at once. If breathing stops, perform artificial respiration. Seek immediate medical attention.</p> <p>CLOTHING: May bond skin to clothing and may release heat, causing burns. Cool burned area immediately with cold water. If clothing adheres to skin, do not pull; peel slowly under lukewarm water. Consult a physician for treatment of burns.</p>										
4.2	<p>Medical Conditions Aggravated by Exposure: None known.</p> <table border="1" style="float: right;"> <tr> <td>HEALTH</td> <td style="text-align: center;">2</td> </tr> <tr> <td>FLAMMABILITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td>REACTIVITY</td> <td style="text-align: center;">2</td> </tr> <tr> <td>PROTECTIVE EQUIPMENT</td> <td style="text-align: center;">A</td> </tr> <tr> <td>EYES</td> <td></td> </tr> </table>	HEALTH	2	FLAMMABILITY	1	REACTIVITY	2	PROTECTIVE EQUIPMENT	A	EYES	
HEALTH	2										
FLAMMABILITY	1										
REACTIVITY	2										
PROTECTIVE EQUIPMENT	A										
EYES											

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: < 83°C (181°F) TCC
5.2	Autoignition Temperature: ND
5.3	Flammability Limits: Lower Explosive Limit (LEL): ND Upper Explosive Limit (UEL): ND
5.4	Fire & Explosion Hazards: Rapid polymerization may occur at very high temperatures.
5.5	Extinguishing Methods: CO₂, Halon, Dry Chemical
5.6	<p>Firefighting Procedures:</p> <p>When involved in a fire, this product will ignite readily and decompose to produce oxides of carbon and nitrogen and hydrogen cyanide. Vapors of this product are heavier than air and may travel to a source of ignition and flash back to a leaking or open container.</p> <p>First responders should wear eye protection. Structural firefighters must wear SCBAs and full protective equipment. Use a water spray or fog to reduce or direct vapors. Water may not be effective in actually extinguishing a fire involving this product.</p>

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6. ACCIDENTAL RELEASE MEASURES

6.1	<p>Spills:</p> <p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment.</p> <p>For small spills (e.g., <1 gallon) wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows) and secure all sources of ignition. Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse.</p> <p>For spills \geq 1 gallon, deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Use ONLY non-sparking tools for recovery and cleanup. Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.</p>
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7. HANDLING & STORAGE INFORMATION

7.1	<p>Work & Hygiene Practices:</p> <p>Avoid prolonged or repeated skin contact. Avoid breathing vapors of this product. Use eye protection when using this product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans). After use, wash hands and exposed skin with soap & water. Do not eat, drink or smoke while handling product.</p>
7.2	<p>Storage & Handling:</p> <p>Open containers slowly on a stable surface. Keep container closed tightly when not in use. Empty container may contain residual amounts of this product; therefore, empty containers should be handled with care.</p> <p>Store containers in a cool, dry location, away from direct sunlight, other light sources, or sources of intense heat. Ideal storage temperatures: 5-10 °C. Store away from incompatible materials (see Section 10, Stability and Reactivity).</p>
7.3	<p>Special Precautions:</p> <p>Open containers slowly on a stable surface. Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care.</p>

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	<p>Ventilation & Engineering Controls:</p> <p>Use in a well ventilated location (e.g., local exhaust ventilation, fans).</p>
8.2	<p>Respiratory Protection:</p> <p>No special respiratory protection is required under typical circumstances of use or handling. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134, or applicable U.S. state regulations, or the appropriate standards of Canada, its provinces, E.C. member states, or Australia.</p>
8.3	<p>Eye Protection:</p> <p>Safety glasses with side shields should be used with this product. This product is irritating to the eyes.</p>
8.4	<p>Hand Protection:</p> <p>Warning! This product will bond skin instantly. Therefore, the use of latex or rubber gloves is recommended. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, of the E.C. member states.</p>
8.5	<p>Body Protection:</p> <p>No apron required when handling small quantities.</p> <p>When handling large quantities (e.g., \geq 1 gallon), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.</p>

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9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	1.04
9.2	Boiling Point:	> 300°F (> 149°C)
9.3	Melting Point:	ND
9.4	Evaporation Rate:	ND
9.5	Vapor Pressure:	< 0.2 mm Hg
9.6	Molecular Weight:	NA
9.7	Appearance & Color:	Clear to slightly yellow liquid. Thixotropic gel with sharp, irritating acrylic odor.
9.8	Odor Threshold:	ND
9.9	Solubility:	Insoluble in water.
9.10	pH	NA
9.11	Viscosity:	Low viscosity.
9.12	Other Information:	Vapor density > 3 @ 20°C (68°F) (air = 1); Polymerizes in water.

10. STABILITY & REACTIVITY

10.1	Stability:	Stable under ambient conditions when stored properly (see Section 7, Storage and Handling).
10.2	Hazardous Decomposition Products:	If exposed to extremely high temperatures, the products of thermal decomposition may include irritating vapors and carbon oxide gases and hydrogen cyanide (e.g., CO, CO ₂ , HCN).
10.3	Hazardous Polymerization:	May occur, if exposed to extremely high temperatures or exposed to moisture.
10.4	Conditions to Avoid:	Exposure to or contact with extreme temperatures, strong light sources or incompatible materials.
10.5	Incompatible Substances:	This product is incompatible with strong oxidizers (e.g., peroxides, superoxides), strong acids (e.g., hydrochloric or muriatic acids), or strong bases (e.g., lye, potassium hydroxide).

11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data:	This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature. These data have not been presented in this document.
11.2	Acute Toxicity:	See Section 2.5
11.3	Chronic Toxicity:	See Section 2.6
11.4	Suspected Carcinogen:	NE
11.5	Reproductive Toxicity:	This product is not reported to cause reproductive toxicity in humans.
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.
	Teratogenicity:	This product is not reported to cause teratogenic effects in humans.
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.
11.6	Irritancy of Product:	See Section 2.3
11.7	Biological Exposure Indices:	NE
11.8	Physician Recommendations:	Treat Symptomatically.

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12. ECOLOGICAL INFORMATION

12.1	Environmental Stability: This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds.
12.2	Effects on Plants & Animals: There are no specific data available for this product.
12.3	Effects on Aquatic Life: There are no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life.

13. DISPOSAL CONSIDERATIONS



13.1	Waste Disposal: Waste disposal must be in accordance with federal, state, and local regulations.
13.2	Special Considerations: NA

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND): NOT REGULATED	
14.2	IATA (AIR): NOT REGULATED	
14.3	IMDG (OCN): NOT REGULATED	
14.4	TDGR (Canadian GND): NOT REGULATED	
14.5	ADR/RID (EU): NOT REGULATED	
14.6	MEXICO (SCT): NOT REGULATED	
14.7	ADGR (AUS): NOT REGULATED	

15. REGULATORY INFORMATION







15.1	SARA Reporting Requirements: NA	
15.2	SARA Threshold Planning Quantity: NA	
15.3	TSCA Inventory Status: The components of this product are listed on the TSCA Inventory.	
15.4	CERCLA Reportable Quantity (RQ): NA	
15.5	Other Federal Requirements: This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics).	
15.6	Other Canadian Regulations: This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDL. None of the components of this product are listed on the Priorities Substances List.	
15.7	State Regulatory Information: None of the ingredients in this mixture are listed on any state criteria lists.	
15.8	67/548/EEC (European Union) Requirements: The primary component of this product is listed in Annex I of EU Directive 67/548/EEC: <u>Ethyl Cyanoacrylate</u>: Irritant (XI). R: 36/37/38-43 - Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. S: 24/25-26-46 - Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If swallowed, seek medical advice immediately and show this MSDS or container label.	

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16. OTHER INFORMATION

16.1	<p>Other Information: Do not store near eye drops. Eye Irritant. If eye contact occurs, flush immediately with water and seek medical attention. Bonds skin instantly. If skin bonds, do not pull - peel apart gently using acetone. Avoid contact with fabrics as heat may occur. Keep out of reach of children.</p>		
16.2	<p>Terms & Definitions: Please see last page of this MSDS.</p>		
16.3	<p>Disclaimer: This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & OPI Products' knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.</p>		
16.4	<table border="0"> <tr> <td data-bbox="89 716 574 898"> <p>Prepared for: OPI Products, Inc. 13034 Saticoy Street No. Hollywood, CA 91605 USA +1 (818) 759-2400 phone +1 (818) 759-5770 fax http://www.opi.com/</p> </td> <td data-bbox="574 716 1552 898" style="text-align: center; vertical-align: middle;">  </td> </tr> </table>	<p>Prepared for: OPI Products, Inc. 13034 Saticoy Street No. Hollywood, CA 91605 USA +1 (818) 759-2400 phone +1 (818) 759-5770 fax http://www.opi.com/</p>	
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16.5	<table border="0"> <tr> <td data-bbox="89 898 574 1079"> <p>Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR. 97759-0787 +1 (310) 360-3700 phone +1 (310) 360-5700 fax http://www.shipmate.com/</p> </td> <td data-bbox="574 898 1552 1079" style="text-align: center; vertical-align: middle;">  <p><i>Dangerous Goods Training & Consulting</i></p> </td> </tr> </table>	<p>Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR. 97759-0787 +1 (310) 360-3700 phone +1 (310) 360-5700 fax http://www.shipmate.com/</p>	 <p><i>Dangerous Goods Training & Consulting</i></p>
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DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
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EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard



PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or S.O.P. for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Eye Protection	Gloves
Boots	Synthetic Apron	Full Suit	Dust Respirator
Vapor Respirator	Dust & Vapor Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

Note: the dotted circle indicates that this respiratory protective equipment is required for high concentrations or for large volume spills or releases of product.

OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

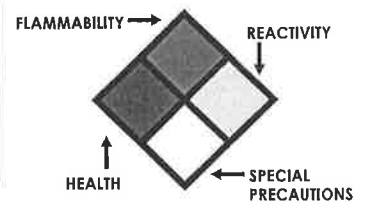
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Aut ignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
-W	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD₁₀	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₁₀, LD₁₀, & LD₀ or TC, TC₀, LC₁₀, & LC₀	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_n	Median threshold limit
log K_{ow} or log K_{oc}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)

EC INFORMATION:

C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful