



MATERIAL SAFETY DATA SHEET

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CND-N-020

Prepared to OSHA, ACC, ANSI and WHMIS Standards

MSDS Revision Date 11/01/2002

1. PRODUCT IDENTIFICATION

1.1	Product Name: RADICAL SOLARNAIL LIQUID
1.2	Chemical Name: ETHYL METHACRYLATE SOLUTION
1.3	Synonyms:
1.4	Trade Names:
1.5	Product Use: PROFESSIONAL OR SUNDAY USE ONLY
1.6	Manufacturer's Name: CREATIVE NAIL DESIGN, INC.
1.7	Manufacturer's Address: 1125 JOSHUA WAY, VISTA, CA 92083
1.8	Emergency Phone: ROCKY MOUNTAIN POISON CONTROL CENTER: 1-303-623-5716
1.9	Business Phone: 1-800-833-NAIL (6245)

2. COMPOSITION & INGREDIENT INFORMATION

NA = Not Available; ND = Not Determined; NE = Not Established; 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 Z400.1-1998 format.



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3. HAZARD IDENTIFICATION

3.1	Hazard Identification:					
3.2	Routes of Entry:	Inhalation:	YES	Absorption:	YES	Ingestion:
3.3	Effects of Exposure: INGESTION: If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervous system depression. SKIN & EYES: Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering. May be irritating to skin, especially after prolonged contact. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated skin exposure. INHALATION: Vapors of this product may be moderately 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 concentrated vapors can cause central nervous system depression (e.g., drowsiness, dizziness, headaches, nausea).					
3.4	Symptoms of Overexposure: Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Overexposure in eyes may cause redness, itching and watering. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.					
3.5	Acute Health Effects: Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.					
3.6	Chronic Health Effects: No long-term health effects are known.					
3.7	Target Organs: Eyes, skin & respiratory system.					

4. FIRST AID MEASURES

4.1	First Aid: 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 Rocky Mountain Poison Control Center at 1-303-623-5716 or 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. EYES & SKIN: If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. Open and close eyelid(s) to ensure thorough irrigation. If problem persists, seek immediate medical attention. If irritation occurs & product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with plenty of soap and water. Do not wear contaminated clothing until after it has been properly cleaned. If irritation, redness or swelling persists, consult a physician immediately. INHALATION: Remove victim to fresh air at once. If breathing stops, perform artificial respiration. Seek immediate medical attention.	HEALTH FLAMMABILITY REACTIVITY PROTECTIVE EQUIPMENT EYES	2 3 1 A
4.2	Medical Conditions Aggravated by Exposure: Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, respiratory system).		



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5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: 26°C (79°F)			
5.2	Autoignition Temperature: ND			
5.3	Flammability Limits:	Lower Explosive Limit (LEL):	NE	Upper Explosive Limit (UEL):
5.4	Fire & Explosion Hazards: This product is a flammable liquid. When involved in a fire, this product may ignite and decompose to form toxic gases (e.g., CO, CO₂, NO_x).			
5.5	Extinguishing Methods: Water, Foam, CO₂, Dry Chemical			
5.6	Firefighting Procedures: First responders should wear eye protection. Structural fire fighters must wear full protective equipment and MSHA/NIOSH-approved self-contained breathing apparatus. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, rinse contaminated equipment with soapy water before returning to service.	 RED = FLAMMABILITY BLUE = HEALTH YELLOW = REACTIVITY WHITE = SPECIAL MEASURES		0 = NO HAZARD 1 = MINIMAL HAZARD 2 = SLIGHT HAZARD 3 = MODERATE HAZARD 4 = SEVERE HAZARD

6. ACCIDENTAL RELEASE MEASURES

6.1	Spills: Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. 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. For spills ≥ 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.
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices: Avoid prolonged contact with this material. Limit inhalation of the vapors generated by this product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans). Wash exposed skin thoroughly with plenty of soap & water after using this product. Do not eat, drink, or smoke while handling this product.
7.2	Storage & Handling: Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans). Keep away from excessive heat, open flames, sparks, and other possible sources of ignition. Keep away from incompatible materials listed in Section 10. Do not store in damaged or unmarked containers or storage devices. Keep containers securely closed when not in use. Open slowly on a level, stable surface. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Keep away from children at all times!
7.3	Special Precautions: Local exhaust ventilation is recommended.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls: Use with adequate ventilation (e.g., local exhaust ventilation, fans). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).
8.2	Respiratory Protection: No special respiratory protection is required under typical circumstances of use or handling. In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.
8.3	Eye Protection: Avoid eye contact. None required under normal conditions of use. However, may cause irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon), safety glasses with side shields should be used.



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8.4	Hand Protection: None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon), wear rubber or plastic impervious gloves.
8.5	Body Protection: No apron required when handling small quantities. When handling large quantities (e.g., ≥ 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.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	~0.9 (water=1)
9.2	Boiling Point:	ND
9.3	Melting Point:	NE
9.4	Evaporation Rate:	>1 (n-BuAc=1)
9.5	Vapor Pressure:	NE
9.6	Molecular Weight:	NE
9.7	Appearance & Color:	Clear blue to violet blue colored liquid.
9.8	Odor Threshold:	1-3 ppm
9.9	Solubility:	Slightly soluble.
9.10	pH	NA
9.11	Viscosity:	NE
9.12	Other Information:	Vapor density > 1

10. STABILITY & REACTIVITY

10.1	Stability:	Relatively stable under ambient conditions when stored properly.
10.2	Hazardous Decomposition Products:	If exposed to extremely high temperatures, products of thermal decomposition may include irritating vapors and toxic gases (e.g., oxides of carbon & nitrogen).
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Exposure or contact to extreme temperatures, incompatible chemicals, strong light sources, sparks, flame.
10.5	Incompatible Substances:	Strong oxidizers, peroxides or strong acids.

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 3.5
11.3	Chronic Toxicity:	No long term health effects are known.
11.4	Suspected Carcinogen:	NE
11.5	Reproductive Toxicity:	None
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans. However, animal mutation data are available for the components of this product were obtained during clinical studies on specific animal tissues exposed to high doses of these components.
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.
	Teratogenicity:	This product is not reported to produce teratogenic effects in humans.
	Reproductive Toxicity:	This product is not reported to produce reproductive effects in humans.
11.6	Irritancy of Product:	See Section 3.3
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 is no specific data available for this product.
12.3	Effects on Aquatic Life:	There is no specific data available for this product. Releases of large volumes may be harmful or fatal to overexposed aquatic life. Aquatic toxicity data for components of this product are available, but are not presented in this MSDS.

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Dispose in accordance with local, state and Federal hazardous waste laws. U.S. EPA Characteristic Waste: D001 (flammable)
13.2	Special Considerations:	NA

14. TRANSPORTATION INFORMATION

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

14.1	49 CFR (GND): CONSUMER COMMODITY, ORM-D (≤ 5.0 L) FLAMMABLE LIQUID, N.O.S. (ETHYL METHACRYLATE), 3, UN1993, III (> 5.0 L)	
14.2	IATA (AIR): CONSUMER COMMODITY, 9, ID8000 (≤ 0.5 L) FLAMMABLE LIQUID, N.O.S. (ETHYL METHACRYLATE), 3, UN1993, III, LTD QTY (> 0.5 L, ≤ 5.0 L) FLAMMABLE LIQUID, N.O.S. (ETHYL METHACRYLATE), 3, UN1993, III (> 5.0 L)	
14.3	IMDG (OCN): FLAMMABLE LIQUID, N.O.S. (ETHYL METHACRYLATE), 3, UN1993, III, LTD QTY (≤ 5.0 L) FLAMMABLE LIQUID, N.O.S. (ETHYL METHACRYLATE), 3, UN1993, III (> 5.0 L)	
14.4	TDGR (Canadian GND): MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" (≤ 5.0 L) FLAMMABLE LIQUID, N.O.S. (ETHYL METHACRYLATE), 3, UN1993, III (> 5.0 L)	
15. REGULATORY INFORMATION		

15.1	SARA Reporting Requirements: SARA 304 (Ethyl Methacrylate)	
15.2	SARA Threshold Planning Quantity: Not applicable.	
15.3	TSCA Inventory Status: All components of this product are listed in the TSCA Inventory or are exempt.	
15.4	CERCLA Reportable Quantity (RQ): Ethyl Methacrylate = 1000 lbs	
15.5	Other Federal Requirements: NA	
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/NDSL. None of the components of this product are listed on the Priorities Substances List. Class B2 Flammable Liquid.	
15.7	State Regulatory Information: Ethyl methacrylate is covered under specific state criteria. No components of this mixture are listed in the California Proposition 65 Lists.	



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16. OTHER INFORMATION

16.1	Other Information: Precisely follow directions and MSDS (available through your supplier) for use. Avoid all skin contact. If redness or other signs of adverse reaction occur, discontinue use immediately. Use only in a well ventilated area. A ventilation system that expels vapors to the outdoors is recommended. Poisonous if swallowed! Keep out of reach of children. FLAMMABLE! Keep away from heat or flame. In case of emergency, contact your physician or local Poison Control Center immediately. FOR PROFESSIONAL USE ONLY.
16.2	Terms & Definitions: See page 7 of this MSDS.
16.3	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 & Creative Nail Design's 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.
16.4	Prepared for: Creative Nail Design, Inc. 1125 Joshua Way Vista, CA 92083 1-800-833-NAIL (6245) phone 760-599-4005 fax http://www.creativenaildesign.com/
16.5	Prepared by: ShipMate, Inc. 18436 Hawthorne Boulevard, Suite 201 Torrance, CA 90504 310-370-3600 phone 310-370-5700 fax http://www.shipmate.com/



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DEFINITIONS OF TERMS

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

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

ACGIH – The American Conference on Governmental Industrial Hygienists, a professional association which establishes exposure limits.

TLV – Threshold Limit Value – an airborne concentration of a substance which represents conditions under which it is generally believed that all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (**TWA**), the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level (**C**). Skin absorption effect must also be considered.

OSHA – U.S. Occupational Safety and Health Administration

PEL – Permissible Exposure Limit – This exposure value means exactly the same as TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June 1993 Air Contaminants Rule (**Federal Register**: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

IDLH – Immediately Dangerous to Life and Health – This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. The **DFG – MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. NIOSH is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (**RELs**). When no exposure guidelines are established, an entry of **NE** is made for reference.

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.

HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards. **Health Hazard:** **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). **Flammability hazard:** **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquids or solids; liquids with a flashpoint of 38-93C [100-200F]); **3** (Class 1B and 1C flammable liquids with flash points below 38C [100F]); **4** (Class 1A flammable liquids with flash points below 23C [73F] and boiling points below 38C [100F]). **Reactivity Hazard:** **0** (normally stable); **1** (materials that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate when initiated or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures). **PPE Rating X:** An industrial hygienist should specify personal protective equipment.

NATIONAL FIRE PROTECTION ASSOCIATION: **Health Hazard:** **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (material that under very short exposure could cause death or major residual injury).

Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System."

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). **Flash Point** – minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. **Autoignition Temperature:** The minimum temperature required to initiate combustion in air with no other source of ignition. **LEL** – the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. **UEL** – the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms use definitions from this section are: **LD₅₀** – Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC₅₀** – Lethal concentration (gases) which kills 50% of the exposed animals; **ppm** – concentration expressed in parts of material per million parts of air or water; **mg/m³** – concentration expressed in weight of substance per volume of air; **mg/kg** – quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TD₀**, the lowest dose to cause a symptom and **TCLO** the lowest concentration to cause a symptom; **TD₀, LD_{Lo}, and LD₀, or TC, TCo, LCLO, and LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** – the International Agency for Research on Cancer; **NTP** – the National Toxicology Program, **RETECS** – the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. **IARC** and **NTP** rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI** – **ACGIH** Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a health worker who has been exposed to chemical to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** EC is the effect concentration in water. **BCF** – Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. **TL_m** – median threshold limit; Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S. and CANADA: This section explains the impact of various laws and regulation of the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Material Information System. **DOT** and **TC** and the U.S. Department of Transportation and the Transport Canada, respectively. Superfund Amendments and Reauthorization Act (**SARA**); the Canadian Domestic/Non-Domestic Substance List (**DSL/NDSL**); the U.S. Toxic Substance Control Act (**TSCA**); Marine Pollutant status according to the DOT; the Comprehensive Environmental Response, Compensation, and Liability Act (**CERCLA** or **Superfund**); and various state regulations. This section also includes information on the precautionary warnings which appear on the material's package label.

EUROPEAN and INTERNATIONAL: **EC** is the European Community, formerly known as the EEC, European Economic Community. **EINECS:** This is the European Inventory of Existing Chemical Substances. **AICS** is the Australian Inventory of Chemical Substances. **MITI** is the Japanese Minister of International Trade and Industry. **ECL** is the Korean Existing Chemicals List. **IMO** is the International Maritime Organization and **IATA** is the International Air Transport Association. The **ARD** is the European Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail.

