

3. COMPOSITION & INGREDIENT INFORMATION

| CHEMICAL NAME(S) | CAS No. | RTECS No. | EINECS No. | % | EXPOSURE LIMITS IN AIR (mg/m3) | | | | | | | | |
|--------------------------------|---------|-----------|------------|-------|--------------------------------|------|--------|---------|---------|------|------|------|-------|
| | | | | | ACGIH | | NIOSH | | | OSHA | | | OTHER |
| | | | | | ppm | | ppm | | | ppm | | | |
| | | | | | TLV | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL | IDLH | |
| Glacial Methacrylic Acid | 79-41-4 | NA | 201-204-4 | <99.5 | 20 | NA | 20 | NA | NF | NA | NA | NA | |
| Tocopheryl Acetate (Vitamin E) | 58-95-7 | GP820000 | 200-405-4 | ≤0.1 | NA | NA | NF | NF | NF | NA | NA | NA | |

4. FIRST AID MEASURES

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| 4.1 | First Aid: | <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 & EYES: 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. Seek immediate medical attention. 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. Remove all contaminated clothing including footwear and wash thoroughly before reuse. If irritation, redness or swelling persists, consult a physician immediately.</p> <p>INHALATION: Remove victim to fresh air at once. If breathing stops, perform artificial respiration. Seek immediate medical attention.</p> |
| 4.2 | Medical Conditions Aggravated by Exposure: | |
| | Pre-existing dermatitis, other skin conditions and disorders of the target organs (eyes, skin) | |
| | | Target Organs: |
| | | EYES SKIN LUNGS |

5. FIREFIGHTING MEASURES

| | | |
|-----|---------------------------|---|
| 5.1 | Flashpoint & Method: | 77.22 °C (171 °F) Closed Cup |
| 5.2 | Autoignition Temperature: | 68 °C (154 °F) |
| 5.3 | Flammability Limits: | Lower Explosive Limit (LEL): NA Upper Explosive Limit (UEL): NA |
| 5.4 | Fire & Explosion Hazards: | <p>This product is combustible. When involved in a fire, this product may ignite and decompose to form toxic gases (e.g., CO, CO2 and Nox)</p> |
| 5.5 | Extinguishing Methods: | |
| 5.6 | Fire Fighting Procedures: | |
| | | <p>Water, Foam, CO2, Dry Chemical</p> <p>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 return to service.</p> |

6. ACCIDENTAL RELEASE MEASURES

| | | |
|-----|---------|--|
| 6.1 | Spills: | <p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. For small spills (e.g., 1 gallon [3.785 liters]) wear appropriate personal protective equipment (e.g., goggles & gloves). Maximize ventilation (open doors and windows). Expose spilled material to UV light source for 2-5 minutes. Lift cured material from substrate and repeat until very little residue remains. Remove remaining spilled material with absorbent material and place into appropriate closed container(s). Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with warm, soapy water. Remove any contaminated clothing and wash before reuse. For large spills (e.g., > 1 gallon [3.785 liters]) deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Expose spilled material to UV light source for 2-5 minutes. Lift cured material from substrate and repeat until very little residue remains. Remove remaining spilled material with absorbent material and place into appropriate closed container(s). Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with warm, soapy water. Remove any contaminated clothing and wash before reuse. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.</p> |
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7. HANDLING AND STORAGE INFORMATION

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|-----|---------------------------|---|
| 7.1 | Work & Hygiene Practices: | Avoid prolonged contact with this material. Avoid breathing 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 and water after using this product. If necessary, use a moisturizer after washing. Do not eat, drink or smoke while handling this product. |
| 7.2 | Storage & Handling: | Use and store in a cool, dry, well ventilated location. Keep away from excessive heat. 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. As a precaution against exposure to the eyes, nose, throat and face, this product should not be stored higher than waist level. KEEP AWAY FROM CHILDREN AT ALL TIMES! |
| 7.3 | Special Precautions: | Do not store where temperatures can exceed 50 °C (122 °F). |

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

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| 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 protections 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, application 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: | Wear protective eyewear (e.g., safety glasses with side shields) at all times when handling this product. Always use protective eyewear when cleaning spills or leaks. Contact lenses pose a special hazard; soft lenses may absorb and concentrate irritants. |  |
| 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 [3.785 liters]), wear nitrile or 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

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|-----|---------------------|---------------------------|
| 9.1 | Density: | 1.015 |
| 9.2 | Boiling Point: | 163 °C (325 °F) |
| 9.3 | Melting Point: | 16 °C (61 °F) |
| 9.4 | Evaporation Rate: | <1 n-Butyl Acetate |
| 9.5 | Vapor Pressure: | 0.131 kPa @ 25°C |
| 9.6 | Appearance & Color: | Clear liquid |
| 9.7 | Odor Threshold: | NE |
| 9.8 | Solubility: | Soluble |
| 9.9 | pH: | NA |
| 9.1 | Viscosity: | approximately 25 cps |
| 9.1 | Flash Point: | 77 °C (171 °F) calculated |
| 9.1 | Other Information: | NA |

10. STABILITY & REACTIVITY

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|----|-----------------------------------|--|
| 10 | Stability: | Relatively stable under ambient conditions when stored properly. |
| 10 | 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 and nitrogen). |
| 10 | Hazardous Polymerization: | Will not occur. |
| 10 | Conditions to Avoid: | Exposure or contact to extreme temperatures, incompatible chemicals, strong light sources, sparks and flame. |
| 11 | Incompatible Substances: | Strong oxidizers, peroxides, strong acids or alkalis. |

11. TOXICOLOGICAL INFORMATION

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| 11 | Toxicity Data: Performed by the manufacturer of the methacrylic acid Acute Oral Toxicity: LD50: 1060 mg/kg Species: Rat Acute Inhalation Toxicity: LD50: 7.1 mg/l Exposure time: 4 hrs Species: Rat Acute Dermal Toxicity: LD50: 500 mg/kg Species: Rabbit |
| 11 | Acute Toxicity: See Section 2.5 |
| 11 | Chronic Toxicity: See Section 2.6 |
| 11 | Suspected Carcinogen: The ingredients of this product are not listed as carcinogens by the National Toxicology Program and have not been evaluated by the Internail Agency for Research on Cancer or the American Conference of Government Industrial Hygenists. |
| 12 | 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 products is not reported to cause teratogenic effects in humans. |
| 12 | Irritancy of Product: See Section 2.3 |
| 12 | Biological Exposure Indicies: NE |
| 12 | Physician Recommendations: Treat symptomatically |

12. ECOLOGICAL INFORMATION

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| 12 | Environmental Stability: This product will slowly evaporate from soil. Components of this product will slowly decompose into organic compounds. Bioconcentration is not anticipated to be significant. This compound can be removed from contaminated environments from volatilization and biodegradation. |
| 12 | Effects on Plants & Animals: There is no specific data availble for this product on plant life. |
| 12 | Effects on Aquatic Life: There is no specific data availble for this product on aquatic life. |

13. DISPOSAL CONSIDERATIONS

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| 13 | Waste Disposal: Dispose in accordance with local, state and Federal waste laws. |
| 13 | Special Considerations: This material becomes an inert plastic upon prolonged exposure to sources of UV light and sunlight. Disposal of inert plastics is safer for the environment and is more easily handled for disposal according to local, state and Federal regulations. |

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, SCT, ADR and the CTDGR.

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| 14 | 49 CFR (GRD): Limited Quantity: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, LTD QTY (IP ≤0.1 L) Fully Regulated: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, (IP >0.1 L) | |
| 14 | IATA (AIR): Passenger Aircraft: Excepted Quantity: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, LTD QTY (IP ≤30 ml) Code E2 - Maximum Quantity Allowed: 500 ml Limited Quantity: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, LTD QTY (IP ≤0.1 L) Maximum Quantity Allowed: 0.5 L Net Fully Regulated: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, (IP >0.1 L ≤1.0 L) Maximum Quantity Allowed: 1.0 L Net Air Cargo Only: Fully Regulated: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, (IP >1.0 L ≤2.5 L) Maximum Quantity Allowed: 30.0 L Net | |
| 14 | IMDG (OCN): Excepted Quantity: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, LTD QTY (IP ≤30 ml) Code E2 - Maximum Quantity Allowed: 500 ml Limited Quantity: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, LTD QTY (IP ≤1.0 L) Maximum Quantity Allowed: 1.0 L Net Fully Regulated: UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, (IP >0.1 L ≤40.0 L) Maximum Quantity Allowed: 400 Kg Net | |
| 14 | TDGR (Canadian GND): UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, LTD QTY (IP ≤1.0 L) | |
| 15 | ADR/RID (EU): UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, LTD QTY (IP ≤1.0 L) | |
| 15 | MEXICO (SCT): UN1760 Líquido Corrosivo, N.O.S. (ácido metacrílico glacial, solución), 8, II, LTD QTY (IP ≤1.0 L) | |
| 15 | ADGR (AUS): UN1760 Corrosive Liquid, N.O.S. (Glacial Methacrylic Acid, Solution), 8, II, LTD QTY (IP ≤1.0 L) | |

15. REGULATORY INFORMATION

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| 15 | SARA Reporting: NA | |
| 15 | SARA Threshold Planning Quantity: NA | |
| 15 | TSCA Inventory Status: All components of this product are listed in the TSCA Inventory or are exempt | |
| 15 | CERCLA Reportable Quantity (RQ): NA | |
| 16 | Other Federal Requirements: This products complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics). | |
| 16 | Other Canadian Regulations: This product has been classified according to the hazard criteria of the CPR and the SDS 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 on the Priorities Substances List. |  |
| 16 | State Regulatory Information: No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances list, (MN), New Jersey Right-to-Know List (NJ), new York Hazardous Substances List (NY), Pennsylvania Right-to-Know list (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI) | |
| 16 | 67/548/EEC (European Union), Australian NOHSC:2011 (2003), and GHS Requirements: The primary cononent of this product is listed in Annex 1 of EU Directive 67/548/EEC. Methacrylic Acid: Harmful (Xi). Risk Phrases (R): See section 2.1 |  |

16. OTHER INFORMATION

16 Other Information:
WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES EYE IRRITATION. Avoid breathing fume, gas, mist, vapors, spray. Wear protective gloves and eye/face protection. IF ON SKIN - Wash with soap and water. IF IN EYES - Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. If skin irritation or a rash occurs - get medical advice/attention. Do not take internally. Keep away from heat and open flame. KEEP OUT OF THE REACH OF CHILDREN.

16 Terms & Definitions:
 Please see last page of this SDS.

16 Disclaimer:
 This Safety Data Sheet (SDS) 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 McConnell Labs' knowledge, the information contained herein is reliable and accurate as of the date it was prepared; 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 Prepared for:
 McConnell Labs, Inc.
 406 SW Umatilla Ave
 Redmond, OR 97756 USA
 Tel: +1 541 526 1417
 Fax: +1 541 526 1418
<http://www.lighttelescope.com>



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DEFINITION OF TERMS

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

GENERAL INFORMATION:

| | |
|----------------|----------------------------------|
| CAS No. | Chemical Abstract Service Number |
|----------------|----------------------------------|

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:

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| 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. |
|------------|--|

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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

| |
|----------------------------|
| HEALTH |
| FLAMMABILITY |
| PHYSICAL HAZARDS |
| PERSONAL PROTECTION |

PERSONAL PROTECTION RATINGS:

| | | | |
|----------|--|----------|--|
| A | | G | |
| B | | H | |
| C | | I | |
| D | | J | |
| E | | K | |
| F | | X | Consult your supervisor or SOPs for special handling directions. |

| | | | |
|----------------------|-----------------------------------|----------------------------------|---------------------------|
| Safety Glasses | Splash Goggles | Face Shield & Protective Eyewear | Gloves |
| Boots | Synthetic Apron | Protective Clothing & Full Suit | Dust Respirator |
| Full Face Respirator | Dust & Vapor Half-Mask Respirator | Full Face Respirator | Airline Hood/Mask or SCBA |

OTHER STANDARD ABBREVIATIONS:

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

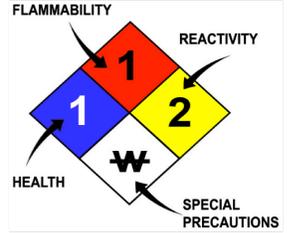
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

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|---------------------------------|---|
| Autoignition 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 |
| TREFOIL | Radioactive |



TOXICOLOGICAL INFORMATION:

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|---|---|
| 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, & LD₅₀ or TC, TC₀₁, LC₁₀, & LC₅₀ | 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_m | 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) |
| WGK | Wassergefährdungsklassen (German Water Hazard Class) |

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

| | | | | | | | |
|------------|-----------|-----------|----------|------------|------------|-----------|----------|
| | | | | | | | |
| Class A | Class B | Class C | Class D1 | Class D2 | Class D3 | Class E | Class F |
| Compressed | Flammable | Oxidizing | Toxic | Irritation | Infectious | Corrosive | Reactive |

EC (67/548/EEC) INFORMATION:

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

CLP/GHS (1272/2008/EC) PICTOGRAMS:

| | | | | | | | | |
|-----------|-----------|----------|-------------|-----------|-------|--------------------|---------------|-------------|
| | | | | | | | | |
| GHS01 | GHS02 | GHS03 | GHS04 | GHS05 | GHS06 | GHS07 | GHS08 | GHS09 |
| Explosive | Flammable | Oxidizer | Pressurized | Corrosive | Toxic | Harmful Irritating | Health Hazard | Environment |