# SAFETY DATA SHEET

**Effective Date** 28-April-2025 **Version** 3

## 1. IDENTIFICATION

**Product Identifier**
**Product Name** GREAT LAKES DENTAL TECHNOLOGIES – DYE CONCENTRATE

**Other means of identification**
**SDS#** 052-53
**UN/ID No** UN1993
**Product Code** 0045-030, 045-031, 45-032, 045-033, 045-034, 045-035, 045-036, 045-037

**Recommended use of the chemical and restrictions on use**
**Recommended Use** Self-curing acrylic resin

**Details of the supplier of the safety data sheet**
**Supplier Address** Lang Dental Mfg. Co., Inc.
175 Messner Dr.
Wheeling, IL 60090
USA

**Emergency telephone number**
**Company Phone Number** +1 847-215-6622
**Emergency Telephone (INFOTRAC)** +1 352-323-3500 (International)
800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

| | |
|---|---|
| Flammable liquids | Category 2 |
| Skin Corrosion / Irritation | Category 2 |
| Skin Sensitization | Category 1 |
| Specific Target Organ Toxicity - Single Exposure (Respiratory) | Category 3 |

**Signal word** Danger

**Hazard statements**
H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.



**Appearance** Clear or slightly tinted **Physical state** Liquid **Odor** Acrid

**Precautionary Statements – Prevention**
P210 Keep away from heat/sparks/open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary Statements – Response**

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim 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.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before use.
P370+P378 In case of fire: Use $CO_2$, for extinction.

**Precautionary Statements – Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P235 Keep cool.

**Precautionary Statements – Disposal**

P501 Dispose of contents/container in accordance with local regulation.

**Hazardous component(s) for labeling** Contains methyl methacrylate

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight - % | Trade Secret |
|---|---|---|---|
| Methyl Methacrylate | 80-62-6 | >95 | * |
| N, N-Dimethyl-p-Toluidine | 99-97-8 | <2 | * |

*Specific chemical weight has been withheld as a trade secret.

## 4. FIRST AID MEASURES

**First aid measures**

**Inhalation** Remove victim to fresh air. Keep at rest in a position comfortable for breathing. Seek immediate medical attention.

**Eye contact** Rinse immediately with plenty of water, including under the eyelids, for at least 15 minutes. If irritation persists, call a physician immediately.

**Ingestion** If ingested, do not induce vomiting. Drink plenty of water or milk immediately. If vomiting, continue to offer water or milk. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately and provide an estimate of when and how much material was ingested. Seek immediate medical attention.

**Skin Contact** Wash with soap and water. If irritation, redness or swelling persists, call a physician immediately. Take off contaminated clothing and wash before reuse.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable:** Chemical (alcohol-resistant) foam, dry chemical, or carbon dioxide
**Unsuitable:** Water spray or water stream may not be effective.

**Specific hazards arising from the chemical**

For bulk size >1L – High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat/pressure. Closed containers may rupture or explode during a runaway polymerization. This product is flammable liquid. 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. Vapor forms an explosive mixture with air.

Acrid smoke-fumes/carbon monoxide/carbon dioxide and perhaps other toxic vapors may be released during a fire involving this product.

**Special Fire Fighting Procedures**
Use a water spray or fog to reduce or direct vapors, and keep containers cool. Water may not be effective in actually extinguishing a fire involving this product. Do not enter fire area without proper protection. Fight fire from a safe location. Structural firefighters must wear SCBAs and full protective equipment. Heat/Impurities may cause pressure to build and/or rupture closed containers, spreading fire, increasing risk of burns/injuries.

**Protective equipment and precautions for firefighters**
Wear self-contained breathing apparatus for firefighting if necessary. Do not enter area without proper protection. Fight fire from safe distance/protected location. Heat /impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries. Use water spray to cool unopened containers. Pressure relief system may plug with solids creating risk of overpressure.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** — Before cleaning any spill or leak, individuals must wear personal protective equipment as required. Remove any contaminated clothing and wash thoroughly before reuse.

**Environmental precautions** — ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent product from entering drains. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

**Methods and material for containment and clean-up**

**Method for containment** — Prevent further leakage or spillage if safe to do so. Dike and contain spill with inert material. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. DO NOT use combustible materials such as sawdust. May contaminate water supply.

**Method for clean-up** — Maximize ventilation (open doors and windows) and secure all sources of ignition. Place into appropriate closed container(s) for disposal in accordance with local, state and federal regulations. Wash all affected areas with plenty of warm water and soap.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** — Avoid contact with skin, eyes and clothing. Use good personal hygiene and housekeeping. After use, wash hands and exposed skin with soap and water. Do not eat, drink, or smoke while handling product. Ground and bond all containers when transferring. Ground and bond all containers when transferring. Observe precautions found on the label.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** — Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition Protect from direct sunlight. Keep container closed to prevent water absorption and contamination. Methacrylate stored in bulk must be kept in contact with air (oxygen). Keep at a temperature not exceeding ~~25°C.~~ 30°C/86 °F.

**Packaging materials** — Keep in original container.

**Incompatible materials** — Strong oxidizing agents, strong reducing agents, free-radical generators, inert gases, oxygen scavengers

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure guidelines** — Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required. The following information is given as general guidance.

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|---|---|---|
| Methyl Methacrylate<br>80-62-6 | STEL: 100 ppm<br>TWA: 50 ppm | TWA:100 ppm<br>TWA: 410 mg/m$^3$ | ~~IDLH: 1000 ppm~~<br>TWA: 100 ppm<br>TWA: 410 mg/m$^3$ |

**Appropriate engineering controls**

**Engineering controls** For bulk size: Use local explosion-proof ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

**Individual protection measures, such as personal protective equipment**

**Eye / face protection** Depending on the use of this product, safety glasses or goggles may be worn. If necessary, refer to US OSHA 29CFR SS1910.133, Canadian standards or the European Standard EN 166. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.

**Skin and body protection** If anticipated that prolonged and repeated skin contact will occur during use of this product, wear gloves for routine industrial use. If necessary, refer to US OSHA 29CFR SS1910.138 or the appropriate standards of Canada or the EC member states. Wear suitable protective clothing.

**Respiratory protection** No special respiratory protection is required under typical circumstances of use or handling. If necessary, use only respiratory protection authorized per US OSHA requirement in 29 CFR SS 1910.134, or applicable US state regulations, or the appropriate standards of Canada, its provinces, or the EC member states. VENTILATION: Local exhaust at processing equipment.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Wash hands thoroughly before eating, drinking, or smoking.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Odor** | Acrid |
| **Appearance** | Liquid | **Odor threshold** | Not determined |
| **Color** | Clear | | |

| **Property** | **Values** | **Remarks / Method** |
|---|---|---|
| **pH** | Not determined | |
| **Melting point / freezing point** | Not determined | |
| **Boiling point / boiling range** | 101°C / 214° F | |
| **Flash point** | 12°C / 54°F | |
| **Evaporation rate** | Not determined | |
| **Flammability (solid, gas)** | n/a (liquid) | |
| **Flammability limit** (Air Volume % Lower/Upper) | 2%-8% | |
| **Specific gravity** | 0.949 | Water = 1 |
| **Autoignition temperature** | 421°C / 790°F | |

**Other information**

**Density** 0.949 g/mL

## 10. STABILITY AND REACTIVITY

**Reactivity** Unstable/Reactive upon depletion of inhibitor.

**Chemical stability** Stable under recommended storage conditions

**Possibility of hazardous reactions** None under normal processing

**Hazardous polymerization** Hazardous polymerization may occur.

**Incompatible materials**

Strong oxidizing agents, strong reducing agents, free-radical generators, inert gases, oxygen scavengers
Material has strong solvent properties and can soften paint and rubber.

**Hazardous decomposition products** Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

**Mixture Toxicity** Inhalation Toxicity: 4,632 mg/L

**Component Toxicity** No data available

**Routes of Exposure** – No data available

Target Organs – Eyes, Skin, Respiratory System

| | |
|---|---|
| **Inhalation** | Harmful if inhaled. |
| **Eye contact** | Causes severe eye irritation. |
| **Skin contact** | Causes skin irritation. May be harmful in contact with skin. |
| **Ingestion** | May be harmful if swallowed. |

**Product Components Listed as Carcinogenic** None

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Harmful to aquatic life.

| Chemical Name | Algae / aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| Methyl Methacrylate 80-62-6 | 170: 96 h Psuedokirchneriella subcapitata mg/L EC50 | 125.5-190.7: 96 h Pimephales promelas mg/L LC50 static; 153.9-341.8: 96 h Lepomis macrochirus mg/L LC50 static; 170-206: 96 h Lepomis macrochirus mg/L LC50 flow-through; 243-275: 96 h Pimephales promelas mg/L LC50 flow-through; 326.4-426.9 96 h Poecilia reticulata mg/L LC50 static; >79: 96 h Oncorhynchus mykiss mg/L LC50 flow-through; >79: 96 h Oncorhynchus mykiss mg/L LC50 static | - | 69: 48 h Daphnia magna mg/L EC50 |

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment method**

**Disposal of wastes** Follow all local and national government regulations in disposing material or contaminated packaging.
For U.S. - Dispose of in accordance with federal, state and local regulations. When discarded, it is considered a hazardous waste by the EPA under RCRA. The reportable quantity for methyl methacrylate is 1000 lb. (40 CFR Part 302). Add excess inhibitor before disposing.

**Contaminated Packaging** Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards due to residual material associated with empty containers.
Dispose of all empty containers in accordance with local and national government regulations.

## 14. TRANSPORTATION INFORMATION

**DOT**

| | |
|---|---|
| UN / ID No | UN1993 |
| Proper shipping name | Flammable liquid, n.o.s. (Methyl Methacrylate monomer, stabilized / N,N-Dimethyl-p-Toluidine solution) |
| Hazard Class | 3 |
| Packing Group | II |
| Reportable Quantity (RQ) | 1000 lb. (methyl methacrylate) |

**IATA**

| | |
|---|---|
| UN / ID No | UN1993 |
| Proper shipping name | Flammable liquid, n.o.s. (Methyl Methacrylate monomer, stabilized / N,N-Dimethyl-p-Toluidine solution) |
| Hazard Class | 3 |
| Packing Group | II |

**IMDG**

| | |
|---|---|
| UN / ID No | UN1993 |
| Proper shipping name | Flammable liquid, n.o.s. (Methyl Methacrylate monomer, stabilized / N,N-Dimethyl-p-Toluidine solution) |
| Hazard Class | 3 |
| Packing Group | II |

## 15. REGULATORY INFORMATION

**International Inventories**

Methyl methacrylate 80-62-6

| | | |
|---|---|---|
| **TSCA** | Listed | United States Toxic Substances Control Act, Section 8(b) Inventory |
| **DSL** | Listed | Canadian Domestic Substances List |
| **EINECS** | Listed | European Inventory of Existing Chemical Substances |

**US Federal Regulations**

SARA 302 – Extremely hazardous substance - not listed
SARA 311/312 – Hazard categories – listed Methyl methacrylate 80-62-6
SARA 313 – Methyl Methacrylate 80-62-6

**US State Regulations** California Proposition 65 – Warning. This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin: None

**US State Right-to-Know Regulations** Not established

## 16. OTHER INFORMATION

| **NFPA** | **Health Hazards** | **Flammability** | **Instability** |
|---|---|---|---|
| | 2 | 3 | 2 |
| **HMIS** | **Health Hazards** | **Flammability** | **Physical Hazards** |
| | 2 | 3 | 2 |

**Effective Date** 28-April-2025

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet