

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Great Lakes Dental Technologies, Ltd.
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CHEMTREC: 800-424-9300

Product Name: Liquid Dye Concentrates
Product Number: 045-030, 045-031, 045-032, 045-033, 045-034, 045-035, 045-036, 045-037

Effective Date: 7/6/22

SECTION 2. HAZARDOUS IDENTIFICATION

Potential Health Effects:

Primary Routes of Entry

- Inhalation – harmful if inhaled
- Skin Contact – Causes skin irritation.
- Eye Contact – Causes severe eye irritation
- Ingestion – May be harmful if swallowed.

Medical Conditions Aggravated by Exposure

- Exposed individuals may experience eye tearing, redness, and discomfort. Contact may cause irritation and redness. Prolonged exposure in poorly ventilated area may cause respiratory irritation. Physicians should treat symptoms conventionally, after thorough decontamination.

Classification –

- 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

- Highly flammable liquid and vapor
- Causes skin irritation
- May cause an allergic skin reaction
- May cause respiratory irritation



PRECAUTIONARY STATEMENTS

Prevention:

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

Response:

- IF ON SKIN (or hair): remove / take off immediately all contaminated clothing. Rinse skin with water / shower.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON Center or doctor / physician if you feel unwell.
- If skin irritation or rash occurs, get medical advice / attention.
- Take off contaminated clothing and wash before use.
- In case of fire, use CO2 for extinction.

Storage:

- Store in a well ventilated place. Keep container tightly closed.
- Keep cool.

Disposal:

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

Hazardous Component(s) for labeling: Contains Methyl Methacrylate

Hazards not otherwise classified (HNOC): May be harmful if swallowed.

Other Information: harmful to aquatic life.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight - %	Trade Secret	
Methyl Methacrylate	80-62-6	>95	*	Specific Chemical Weight is withheld as a Trade Secret
N, N-dimethyl-p-toluidine	99-97-8	< 2	*	

SECTION 4. FIRST AID MEASURES

Eye Contact

Immediately flush with plenty of water, including under eyelids. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician immediately.

Skin Contact

Wash off immediately with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs, get medical advice / attention.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center immediately.

Ingestion

Do NOT induce vomiting. Drink plenty of water or milk immediately, even if vomiting. Never give anything by mouth to an unconscious person. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed. Call a physician or poison control center immediately.

Clothing

Remove contaminated clothing, was thoroughly before reuse.

Treatment

Treat symptoms conventionally, after thorough decontamination.

SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Chemical foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media

Water spray or stream.

Unusual Fire / Explosion Hazards

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. Use a water spray or fog to reduce or direct vapors. Extremely flammable. Vapors are heavier than air and may spread along the floors. Vapors may travel to source of ignition and flash back. Heat impurities may cause pressure to build and/or rupture closed containers, spreading fire, increasing risk or burns / injuries.

Hazardous Combustion Products: Carbon Oxides

Sensitivity to -

Mechanical Impact : NO

Static Discharge: YES

Fire Fighting Protective Equipment

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Fight fire from a safe location.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use personal protective equipment as required. Ensure adequate ventilation. Remove any contaminated clothing and wash thoroughly before reuse.

Environmental Precautions

Prevent product from entering drains. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

Method for Containment

Absorb with earth, sand, or other non-combustible material and transfer to containers for later disposal. DO NOT use combustible materials such as sawdust.

Method for Cleanup

Use only non-sparking tools. Wash all affected areas with plenty of warm water and soap.

SECTION 7. HANDLING & STORAGE

Storage temperature

Preferably not exceeding 25° C.

Handling Precautions

Observe precautions found on the label. Keep containers closed when not in use. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. Avoid contact with skin, eyes, and clothing. Use only in well-ventilated areas. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Take precautionary measure against static discharges. Keep away from heat, sparks, open flames, and hot surfaces. NO SMOKING. Use personal protection recommended in section 8. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust, fume, gas, mist, vapor or spray.

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 (i.e.: pilot lights, electric motors, and static electricity). 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).

Packaging Materials

Keep in original container.

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.

SECTION 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	STEL: 100ppm	TWA: 100ppm	IDLH: 1000ppm
80-62-6	TWA: 50ppm	TWA: 410 mg/m ³	TWA: 100ppm
			TWA: 410 mg/m ³

Engineering Controls

Apply technical measures to comply with the occupational exposure limits.

Respiratory Protection

Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely. A suitable mask with filter type A may be appropriate. In the event of formation of particularly high levels of vapor, a self-contained breathing apparatus may be appropriate.

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.

Eye / Face Protection

Depending on the use of this product, splash or safety glasses may be worn. If necessary, refer to U.S. OSHA 29 CFR SS 1910.133, Canadian standards or the European Standard EN 166. Ensure that an eyewash station, sink, or washbasin is available in case of exposure to eyes.

General Hygiene Consideration

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

- **Form** – Liquid
- **Color** – Colored
- **Odor** –Acrid
- **Flash Point** – 12 °C (54 °F) (TCC)
- **Flammable Limits** – N/A
- **Vapor Pressure** (28 mmHg) - 20 °C
- **Vapor Density (Air = 1)** – 3.5 at 15.5 °C (Air = 1)
- **Solubility in Water** – 1.6 wt%
- **Auto-ignition Temperature** – 421 °C (790 °F)
- **Boil Point** – 101 °C (214 °F)
- **Density** – 0.949 g/ml
- **Specific Gravity (H₂O = 1)** – 0.949

Not Determined: Odor Threshold, PH, Melting Point, Freezing Point, Solubility in other solvents, Partition coefficient, Decomposition temperature, Kinematic Viscosity, Explosive Properties, Oxidizing Properties.

SECTION 10. STABILITY & REACTIVITY

Reactivity – Not reactive under normal conditions.

Hazardous Reactions – Hazardous polymerization may occur. Monomer vapors are inhibited and may form polymers in vent or flame arresters, resulting in blockage of vents.

Stability – Unstable / Reactive upon depletion of inhibitor.

Materials to Avoid – Strong oxidizers, strong reducing agents, free radical generators, inert gases, and oxygen scavengers. Material has strong solvent properties and can soften paint and rubber.

Conditions to Avoid – Temperatures above 21 °C, 77 °F, localized heat sources (example drum or band heaters) oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.

Hazardous Decomposition Products – Carbon Oxides.

SECTION 11. TOXICOLOGICAL INFORMATION (non-mandatory)
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<u>Mixture Toxicity</u>	Inhalation Toxicity: 4,632 mg/L
<u>Component Toxicity</u>	No data available
<u>Routes of Exposure</u>	No data available
<u>Target Organs</u>	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

SECTION 12. ECOLOGICAL INFORMATION (non-mandatory)

Ecotoxicity – Harmful to aquatic life with long-lasting effects

Methyl Methacrylate

Algae / Aquatic Plants

- 170: 96 h Psuedokirchneriella subcapitata mg/L EC50

Fish

- 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: 96h Poecilia reticulate mg/L LC50 static
- >79: 96h Oncorhynchus mykiss mg/L LC50 flow through
- >79: 96h Oncorhynchus mykiss mg/L LC50 static

Crustacean

- 48 h Daphnia magna mg/L EC50

N,N-Dimethyl-p-Toluidine

Fish

- 42 – 50.5: 96h Pimphales promelas mg/L LC50 flow through

Persistence and degradability

Not readily biodegradable

Bioaccumulation

Not determined

Mobility

Potential for mobility in soil is very high

Partition Coefficient

Methyl Methacrylate – 0.7

Other Adverse Effects

COD = 88% (28 days), DOC removal > 95 (28 days)

SECTION 13. DISPOSAL CONSIDERATIONS (non-mandatory)

Waste Disposal Method

Follow all local and national government regulations in disposing material or contaminated packaging. For US – 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 lbs. (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 properly in accordance with Federal, State, and Local Regulations.

Methyl Methacrylate

- RCRA – U162
- RCRA – Basis for Listing: Included in waste stream; F039
- RCRA – U Series Wastes: U162
- California Hazardous Waste Status – Toxic Ignitable

SECTION 14. TRANSPORT INFORMATION (non-mandatory)

DOT

- **UN / ID #:** UN1993
- **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 lbs. (Methyl Methacrylate)

IATA

- **UN / ID #:** UN1993
- **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 #:** UN1993
- **Name:** Flammable liquid, n.o.s. (Methyl Methacrylate monomer, stabilized / N, N-dimethyl-p-toluidine solution)
- **Hazard class:** 3
- **Packing Group:** II

SECTION 15. REGULATORY INFORMATION (non-mandatory)

International Inventories

- 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

EU Regulations

- EC # 1272/2008 (CLP) Classification, Labeling, Packaging
- Medical Devices Directive 93/42/EEC – Class I Medical Devices

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

SECTION 16. OTHER INFORMATION (non-mandatory)
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HMIS Rating:

- **Health** – 2
- **Flammability** – 3
- **Instability** – 2

National Fire Protection Association (NFPA) Hazard Identification Rating:

- **Health** – 2
- **Flammability** – 3
- **Physical Hazards** – 2

0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe

* = Chronic Health Hazard

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the data 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 text.