

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION



Great Lakes Orthodontics
200 Cooper Ave
Tonawanda, NY 14150

716-871-1161
800-828-7626
CHEMTREC: 800-424-9300

Product Name: Variflex Monomer Kit
Product Number: 046-003, 046-005 046-001, 046-002

Effective Date: 5-6-16

SECTION 2. HAZARDOUS IDENTIFICATION

| <u>Classification of the substance or mixtures</u> | <u>Category</u> |
|---|-----------------|
| <i>Hazard Class – Physical, Health, Environmental</i> | |
| Flammable Liquid | 2 |
| Skin Corrosion / Irritation | 2 |
| Eye Damage / Irritation | 2A |
| Skin Sensitizer | 1 |

Label Elements – Pictograms, Signal Word, Hazard Statements, Precautionary Statements, and Supplemental Information



Signal Word – Danger

Hazard Statements

H225 Highly flammable liquid and vapour
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation

Precautionary Statements - Prevention, Response & Disposal

- P210 Keep away from heat / sparks / open flames / hot surfaces – no smoking
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment
- P241 use explosion – proof. Electrical / ventilation / light / ... / equipment
- P242 use only non-sparking tools
- P243 Take precautionary measures against static discharge
- P261 Avoid breathing dust / fume / gas / mist / vapours / spray
- P264 Wash hands and exposed skin thoroughly after handling
- P272 Contaminated work clothing should not be allowed out of the workplace
- P280 Wear protective gloves / protective clothing / eye protection / face protection
- P321 Specific treatment (see ... on this label)
- P362 Take off contaminated clothing and wash before reuse
- P363 Wash contaminated clothing before reuse
- P302 /
- P352 IF ON SKIN: Wash with soap and water
- P303 /
- P361 /
- P353 IF ON SKIN (or hair): Remove. Take off immediately all contaminated clothing. Rinse skin with water / shower.
- P305 /
- P351 /
- P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continuing rinsing.
- P332 /
- P313 If skin irritation occurs: Get medical advice / attention
- P333 /
- P313 If skin irritation or a rash occurs: get medical advice / attention
- P337 /
- P313 Get medical advice / attention
- P370 /
- P378 In case of fire: Use CO2 for extinction
- P403 /
- P235 Store in a well ventilated place. Keep cool.
- P501 Dispose of contents / container to an authorized disposal facility

SECTION 3.**COMPOSITION / INFORMATION ON INGREDIENTS**

| <u>Hazardous Components</u> | <u>CAS #</u> | <u>WT / WT%</u> |
|------------------------------------|---------------------|------------------------|
| EOEMA | 2370-63-0 | 10.0 – 50.0 |
| Ethyl Methacrylate Monomer | 97-63-2 | 10.0 – 50.0 |
| Dioctyl Maleate | 142-16-5 | 10.0 – 50.0 |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | 0.0 – 10.0 |
| Trimethylolpropane Trimethacrylate | 3290-92-4 | 0.0 – 10.0 |
| Acetone | 67-64-1 | 0.0 – 10.0 |

| ACGIH | TLV-TWA | TLV-STEL |
|------------------------------------|-----------------|-----------------|
| EOEMA | NOT ESTABLISHED | |
| Ethyl Methacrylate Monomer | ↓ | |
| Dioctyl Maleate | ↓ | |
| 2-Hydroxyethyl Methacrylate | ↓ | |
| Trimethylolpropane Trimethacrylate | ↓ | |
| Acetone | 500ppm | 750ppm |

| OSHA | PEL TWA | PEL CEILING |
|------------------------------------|-----------------|--------------------|
| EOEMA | NOT ESTABLISHED | |
| Ethyl Methacrylate Monomer | ↓ | |
| Dioctyl Maleate | ↓ | |
| 2-Hydroxyethyl Methacrylate | ↓ | |
| Trimethylolpropane Trimethacrylate | ↓ | |
| Acetone | 1000PPM | Not Established |

| | Company Recommendation | Skin |
|------------------------------------|-------------------------------|-----------------|
| EOEMA | 10ppm | Not Established |
| Ethyl Methacrylate Monomer | 100ppm | ↓ |
| Dioctyl Maleate | Not Established | ↓ |
| 2-Hydroxyethyl Methacrylate | Not Established | ↓ |
| Trimethylolpropane Trimethacrylate | Not Established | ↓ |
| Acetone | 500ppm | ↓ |

*NOTE: this material contains an inhibitor (HQ, MEHQ, etc.) at <1%. The type and amount meet product specifications. Contact manufacturer for exact concentration and details on inhibitor level maintenance.

SECTION 4. FIRST AID MEASURES

Eye Contact

If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. If irritation occurs, contact a physician.

Skin Contact

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.

Inhalation

Remove to fresh air. See immediate medical attention.

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 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. Get medical attention immediately.

Clothing

Remove contaminated clothing, was thoroughly before reuse. Treat symptoms conventionally, after thorough decontamination.

Treatment

Treat symptoms conventionally, after thorough decontamination.

SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Chemical foam, Dry chemical, Carbon Dioxide (CO₂). For large fires alcohol resistant foams are preferred.

Special Fire Fighting Procedures

This product is a flammable liquid. When involved in a fire, this product may ignite readily and decompose to produce carbon oxides. 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. Do not enter fire area without proper protection. Fight fire from a safe location. Heat / impurities may cause pressure to build and/or rupture closed containers, spreading fire, increasing risk of burns/injuries. Structural firefighters must wear SCBAs and full protective equipment.

Unusual Fire / Explosion Hazards

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. Water may not be effective in actually extinguishing a fire involving this product.

- **Sensitive to mechanical impact:** NO
- **Sensitive to static discharge:** YES

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spill and Leak Procedures

Before cleaning any spill or leak, individuals involved must wear appropriate personal protective equipment (e.g.: goggles, gloves). Deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g.: sand and earth). Use ONLY non-sparking tools for recovery and cleanup. 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. Remove any contaminated clothing and wash thoroughly before reuse. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

SECTION 7. HANDLING & STORAGE

Handling Precautions

Use local explosion-proof ventilation with a minimum capture velocity of 100 ft. /min (30 m/min) at point of material release. Refer to industrial ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Hygienist. Observe precautions found on label. Use explosion-proof equipment. During some processing and use conditions of this monomer or its downstream products (especially at high temperatures or very low or high PH conditions), it is possible that 2-ethoxy ethanol may evolve.

Storage Precautions

Store containers in a cool, dry location, away from direct sunlight, heat, sparks, flame, other light sources, or sources of intense heat. Keep container closed after each use. Ground and bond all containers when transferring. Check inhibitor levels periodically, add to the bulk material if needed. Maintain at a minimum, the original headspace in the product container. Do not blanket or mix with oxygen-free gas as it renders the

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

inhibitor ineffective.

Industrial Hygiene

Avoid contact with skin, eyes, clothing, and prolonged contact with the product. 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.

Ventilation Measures

Refer to section #7 regarding ventilation requirements for working with this product. Use explosion-proof local exhaust at processing equipment, including buffers, sanders, grinders, and polishers. High temperature processing equipment should be well ventilated.

Respiratory Protection

Respirator equipped with organic vapor cartridges are anticipated to provide adequate respiratory protection during short-term exposures to low concentrations of the material. Workers should wear air-supplied respirator or self-contained breathing apparatus any time exposure is above low levels or during extended periods of exposure periods. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR 1910.134 or other appropriate governing standard.

Hand Protection

If anticipated that prolonged and repeated skin contact will occur during use of this product, wear chemical resistant gloves for routine industrial use. Gloves made of Butyl Rubber are anticipated to afford adequate hand protection. Gloves made of PVC, nitrile, and neoprene are not expected to provide adequate hand protection. If necessary, refer to U.S. OSHA's requirement in 29 CFR 1910.138 or other appropriate governing standards.

Eye Protection

Depending on the use of this product, splash or safety glasses may be worn. Chemical safety goggles should be worn whenever there is the possibility of contact with the eyes. Spectacle type safety glasses do not provide satisfactory protection. Wear plastic face shield in addition to safety goggles where there is a danger of splashing. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or other appropriate governing standard. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.

Additional Protective Measures

Wear protective clothing and boots impervious to the product for the duration of the anticipated exposure if there is a potential for skin contact. If necessary, refer to appropriate governing standards. An eyewash station and a safety shower are recommended.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

- **Appearance** – Liquid
- **Color** – Clear colorless
- **Odor** – Ester odor
- **PH** – Not determined
- **Flash Point (Acetone)** – -18 °C (0 °F)
- **Lower Explosion Limit** – 1.8
- **Upper Explosion Limit** – Saturation concentration.
- **Boiling Point** – Not determined
- **Freezing Point** – Not established
- **Viscosity** – Not established
- **Vapor Pressure** – 29 mm Hg @ not established
- **Percent Volatile W/W%** - Not established
- **Vapor Density (AIR=1)** – Not established
- **Evaporation Rate (BuAc=1)** – Not established
- **Solubility in Water** – Negligible
- **Auto-ignition Temperature** - 411 °C (771 °F)

SECTION 10. STABILITY & REACTIVITY

Hazardous Reactions – Hazardous polymerization may occur.

Stability – Unstable / Reactive upon depletion of inhibitor.

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

Conditions to Avoid – Temperatures above 21 °C (70 °F), localized heat sources (example drum or band heaters) oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.

Hazardous Decomposition Products – Oxides of Carbon when burned.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity Data - This product has not been tested on animals to obtain toxicology data. There is toxicology data for the components of the product, which is found in scientific literature. Some of this data is presented below.

Toxicity Data for EOEMA

Acute oral toxicity

- LD50: > 2,000 mg/kg (Rat)

Acute dermal toxicity

- LD50: > 2,000 mg/kg (Dermal Rabbit)

Toxicity Data for Dioctyl Maleate

Acute oral toxicity

- LD50: 14,000 mg/kg (Rat)

Acute dermal toxicity

- LD50: 14,154 mg/kg (Dermal Rabbit)

Toxicity Data for Ethyl Methacrylate

Acute oral toxicity

- Rat

Acute dermal toxicity

- LD50: > 10,000 mg/kg (Dermal Rabbit)

Inhalation

- LC50: 8,300 ppm/4H (Rat)

Intraperitoneal

- LD50: 1,369 mg/kg (Mouse)
- LD50: 1,223 mg/kg (Rat)

Toxicity Data for 2-Hydroxyethyl Methacrylate

Acute oral toxicity

- LD50: 3,275 mg/kg (Mouse)
- LD50: 5,050 mg/kg (Rat)
- LD50: 4,680 mg/kg (Guinea Pig)

Intraperitoneal

- LD50: 497 mg/kg (Mouse)
- LD50: 1,250 mg/kg (Rat)

Toxicity Data for Trimethylolpropane Trimethacrylate

Intraperitoneal

- LD50: 2,889 mg/kg (Mouse)

Acute dermal toxicity

- LD50: > 2,000 mg/kg (Dermal Rabbit)

Toxicity Data for Acetone

Inhalation

- TCLO: 500 ppm (Human)
- LC50: 50,100 mg/m³ 8H (Rat)

Intraperitoneal

- LDLO: 8 gm/kg (Dog)
- LD50: 1,297 mg/kg (Mouse)
- LD50: 500 mg/kg (Rat)

Intravenous

- LD50: 5,500 mg/kg (Rat)
- LDLO: 1,576 mg/kg (Rabbit)

Oral

- LDLO: 8 gm/kg (Dog)
- TDLO: 2,857 mg/kg (Man)
- LD50: 3,000 mg/kg (Mouse)
- LD50: 5,800 mg/kg (Rat)
- LD50: 5,340 mg/kg (Rabbit)

Subcutaneous

- LDLO: 5gm/kg (Dog)
- LD50: 5,000 mg/kg (Guinea Pig)

Skin

- LD50: 20mL/kg (Rabbit)

Eye Irritation Data (EOEMA)

This compound produced slight eye irritation when tested in rabbits.

Skin Irritation Data (EOEMA)

This compound produced slight skin irritation when tested in rabbits during a 4-hour exposure period. This compound did not produce skin sensitization when tested in Guinea pigs.

Sub-chronic Data (EOEMA)

No sub-chronic data is available for this product. The anticipated pathway for the metabolism of this product in humans may be de-esterification resulting in the metabolite, 2-ethoxy ethanol. The compound 2-ethoxy ethanol may cause blood, bone marrow and organ effects. Contact company for additional information.

Target Organs

- Monomers – None listed.
- Acetone – Liver, kidneys, and central nervous system.

Mutagenicity Data

- **EOEMA** – This compound produced negative results in the vitro Ames test. The acrylate analog, 2-ethoxyethyl acrylate, has been found to be positive in in-vitro mutagenicity assays.
- **Trimethylolpropane Trimethacrylate** – Mouse lymphoma studies indicate that this material may have a mutagenic potential. However the Ames assay for mutagenicity was negative. Therefore, there is reason to believe that the mouse lymphoma assay was a false positive.
- **Acetone** –
 - Fibroblast Hamster – Cytogenetic Analysis = 40 gm/L.
 - S Cerevisitae – Sex Chromosome Loss and Non-disjunction = 47,600ppm.

Reproductive Toxicity Data

- **EOEMA** –
 - Embryo toxicity – This product is not reported to produce embryo toxic effects in humans.
 - Teratogenicity – No teratogenicity data is available for this product. The anticipated pathway for the metabolism of this product in humans may be de-esterification resulting in the metabolite, 2-ethoxy ethanol. The compound 2-ethoxy ethanol has been found to be teratogenic in animal embryotoxicity, reduced fetal body weights, minor skeletal and cardiovascular effects, delayed onset of labor, and increased fetal resorptions. Contact company for additional information.
 - Reproductive Toxicity – No reproductive data is available for this product. The anticipated pathway for the metabolism of this product in humans may be de-esterification resulting in the metabolite, 2-ethoxy ethanol. The compound 2-ethoxy ethanol has been found to be a reproductive toxicant in animals including effects on the testes (and possibly ovaries), reduced sperm counts, and abnormal sperm morphology. Contact company for additional information.
- **Ethyl Methacrylate Monomer** –
 - No information available.
- **Trimethacrylate** –
 - Embryotoxicity – This product is not reported to produce embryo toxic 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.
- **Acetone** –
 - Inhalation Mammal: TCLO 31,500 – $\mu\text{g}/\text{m}^3$ 24H 1-13 days pregnant.

SECTION 12. ECOLOGICAL INFORMATION (non-mandatory)

There is no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life. There is ecological data for the components of the product which is found in scientific literature. Some of this data is presented below.

Aquatic Toxicity

EOEMA – slightly toxic to fish, Daphnia, and algae. Low potential to bio-accumulate. Not expected to be readily biodegradable. Short (hours) atmospheric half-life.

- LC50: 27.7 mg/L, 96 H (Fish)
- EC50: 170 mg/L, 48H (Daphnia)
- LC50: 37 mg/L, 72H (Algae)
- Chronic Fish: 0.5 mg/L 32 days

Ethyl Methacrylate Monomer

- EC50: > 66 mg/L, 48 H (Daphnia Magna)
- LC50: 100 mg/L, 96H (Rainbow Trout)
- EC50: > 0.70 mg/L, 72H (Algae)

2-Hydroxyethyl Methacrylate

- LC50: 227 mg/L, 96H (Flathead Minnows)

Acetone

- LC50: >100 mg/L, 96H (Flathead Minnows)

Environmental Fate (Methyl Methacrylate)

EOEMA – This substance was not found to be readily biodegradable. The BCF is predicted to be 2.8.

Ethyl Methacrylate Monomer – Biodegradation: Inherently biodegradable 79% in 28 days.

Acetone –

- Biodegradation (soil) – Readily biodegradable when released to soil. It is expected to leach to the groundwater. It is expected to evaporate quickly.
- Biodegradation (water) – Readily biodegradable when released to water. It is expected to evaporate quickly.

Physical / Chemical Properties

EOEMA

The Log Kow was found to be 1.36. The Henry's Law constant is predicted to be 8.48×10^{-7} atm*m³/mol. Insoluble in water. The Koc is predicted to be 12.7.

SECTION 13. DISPOSAL CONSIDERATIONS (non-mandatory)

Waste Disposal Method

If discarded in its manufactured form, this product may be a characteristic hazardous waste under RCRA. After addition of excess inhibitor, dispose waste material in accordance with Federal, State, and Local regulations.

Disposal of Empty Containers

Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards, due to residual flammable material associated with empty containers. Dispose of all empty containers properly in accordance with Federal, State, and Local regulations.

SECTION 14. TRANSPORT INFORMATION (non-mandatory)

- **DOT / UN Shipping Name** – Flammable Liquid, NOS (Acetone, Ethyl Methacrylate, Stabilized)
- **DOT / UN Class** - 3
- **NA/UN Number** - 1993
- **Packing Group** – II
- **Label** – Flammable Liquid
- **IMDG Class** – 3
- **CERCLA RQ** – For Ethyl Methacrylate = 1000lbs
For Acetone = 1000lbs

SECTION 15. REGULATORY INFORMATION (non-mandatory)

SARA Reporting Requirements – YES

SARA Threshold Planning Quantity – There are specific threshold planning quantities for the components of this product. This substance, 2-ethoxyethyl Methacrylate is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right To Know Act because the substance meets the definition of the glycol ethers category.

TSCA Inventory Status – The components of this product are listed on the TSCA inventory.

Other Federal Requirements – This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR.

Other Canadian Requirements – 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/NDSL. None of the components of this product are listed on the Priorities Substances List.

State Regulatory Information – This product may contain components that are covered under specific state criteria. This product contains ethylene glycol monoethyl ether (2-ethoxy ethanol), a substance known to the State of California to cause reproductive toxicity. The maximum amount of ethylene glycol monoethyl ether is 200ppm. This information is provided to assist users of this product that conduct business in California.

RISK STATEMENTS

- R11 – Highly flammable
- R36/37/38 – Irritating to eyes, respiratory system, and skin.
- R43 – May cause sensitization by skin contact.

SAFETY STATEMENTS

- S2 – Keep out of reach of children.
- S9 – Keep container in a well-ventilated place.
- S16 – Keep away from sources of ignition – No smoking.
- S29 – Do not empty into drains.
- S33 – Take precautionary measures against static discharges.

| |
|--|
| SECTION 16. OTHER INFORMATION (non-mandatory) |
|--|

HMIS Rating:

- **Health** – 2
- **Flammability** – 3
- **Reactivity** – 2
- **Personal Protective Equipment** – Gloves and safety glasses or Chemical Splash Goggles.

NFPA Rating:

- **Health** – 2
- **Flammability** – 3
- **Reactivity** - 2

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

* = Chronic Health Hazard

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION



Great Lakes Orthodontics
200 Cooper Ave
Tonawanda, NY 14150

716-871-1161
800-828-7626
CHEMTREC: 800-424-9300

Product Name: Variflex Polymer Kit
Product Number: 046-004, 046-006 046-001, 046-002

Effective Date: 12/1/17

SECTION 2. HAZARDOUS IDENTIFICATION

Classification of the substance or mixtures

Hazard Class – Physical, Health, Environmental
Eye Damage / Irritation

Category

2A

OSHA Defind Hazards

Combustible dust, may form combustible dust concentrations in air, explosion hazard

Label Elements – Pictograms, Signal Word, Hazard Statements, Precautionary Statements, and Supplemental Information

Signal Word – Warning

Hazard Statements

H320 Causes eye irritation

Precautionary Statements - Prevention, Response & Disposal

P240 Ground and bond container and receiving equipment

P264 Wash hands and exposed skin thoroughly after handling

P280 Wear protective gloves / protective clothing / eye protection / face protection

P305 /

P351 /

P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and east to do – continuing rinsing.

P337 /

P313 Get medical advice / attention

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

| <u>Hazardous Components</u> | <u>CAS #</u> | <u>WT / WT%</u> | <u>GHS Rating</u> |
|-----------------------------|--------------|-----------------|--------------------------|
| 2 - Propenioc Acid | 9003-42-3 | 90 – 100 | Eye damage/irritation 2B |
| 2-Methyl-ethyl ester | 9003-42-3 | 90 - 100 | Eye damage/irritation 2B |
| Homopolymer | 9003-42-3 | 90 – 100 | Eye damage/irritation 2B |
| 1 – Benzyl - 5 | 72846-00-5 | 1 – 5 | Oral Toxicity 3 |
| Phenylbarbituric Acid | 72846-00-5 | 1 – 5 | Oral Toxicity 3 |

SECTION 4. FIRST AID MEASURES

Eye Contact

If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. If irritation occurs, contact a physician.

Skin Contact

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.

Inhalation

Remove to fresh air. See immediate medical attention.

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 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. Get medical attention immediately.

Clothing

Remove contaminated clothing, was thoroughly before reuse. Treat symptoms conventionally, after thorough decontamination.

Treatment

Treat symptoms conventionally, after thorough decontamination.

SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Water, Dry chemical, Carbon Dioxide (CO₂)

Special Fire Fighting Procedures

Avoid extinguishing methods, which may generate dust clouds. Water stream can disperse dust into air producing a fire hazard and possible explosion hazard if exposed to ignition source.

Unusual Fire / Explosion Hazards

Polymer dust is combustible. The explosive limits of the polymer particles suspended in air are approximately those of coal dust. Firefighters should wear self-contained breathing apparatus.

- **Sensitive to mechanical impact:** NO
- **Sensitive to static discharge:** NO

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spill and Leak Procedures

Before cleaning any spill or leak, individuals involved must wear appropriate personal protective equipment (e.g.: goggles, gloves). Sweep up to avoid slipping hazard. Keep airborne particulates at a minimum when cleaning up spills. Dispose of properly in accordance with local, state, and federal regulations. Wash all affected areas with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before use.

SECTION 7. HANDLING & STORAGE

Handling Precautions

Use in well ventilated areas. Avoid contact with skin, eyes, and clothing. Avoid breathing dust. Use good personal hygiene and housekeeping.

Storage Precautions

Store containers in a cool, dry location, away from direct sunlight, other light sources, or sources of intense heat. Keep container closed to prevent water absorption and contamination.

Industrial Hygiene

Avoid prolonged contact with product. Use good personal hygiene and housekeeping. Use in a well-ventilated location (e.g.: local exhaust ventilation, fans). After use, wash hands and exposed skin with soap and water. Do not eat, drink, or smoke while handling product.

Ventilation Measures

When working with large quantities of product, provide adequate ventilation (e.g.: local exhaust ventilation, fans). Ensure that an eyewash station, sink, or washbasin is available in case of exposure to eyes. Use good local exhaust at processing equipment, including buffers, sanders, grinders, and polishers.

Respiratory Protection

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.

Hand 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 U.S. OSHA's requirement in 29 CFR 1910.138 or other appropriate governing standards.

Eye Protection

Depending on the use of this product, safety glasses or goggles may be worn. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian standards, or European Standard EN166. Ensure that an eyewash station, sink, or washbasin is available in case of exposure to eyes.

Additional Protective Measures

No special body protection is required under typical circumstances of use and handling. If necessary, refer to appropriate standards of Canada, the E.C. member states, or U.S. OSHA. An eyewash station and a safety shower are recommended. High temperature processing equipment should be well ventilated.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

- **Appearance** – Powder
- **Color** – Fine clear to pigmented
- **Odor** – Faint odor in bulk
- **PH** – Not Available
- **Flash Point** – 304 °C (580 °F)
- **Lower Explosion Limit** – Not available
- **Upper Explosion Limit** – Not available
- **Boiling Point** – Not available
- **Freezing Point** – Not available
- **Viscosity** – Not available
- **Vapor Pressure** – Not available
- **Percent Volatile W/W%** - Not available
- **Vapor Density (AIR=1)** – Not available
- **Evaporation Rate (BuAc=1)** – Not available
- **Solubility in Water** – Insoluble

SECTION 10. STABILITY & REACTIVITY

Hazardous Reactions – Hazardous polymerization will not occur.

Stability – Stable.

Materials to Avoid – Strong oxidizing agents.

Conditions to Avoid – Heating above 240 °C (464 °F)

Hazardous Decomposition Products – Methacrylate Monomer and Oxides of carbon when burned.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity Data - This product has not been tested on animals to obtain toxicology data. There is toxicology data for the components of the product, which is found in scientific literature. This data has not been presented in this document.

Mutagenicity Data – This product is not reported to produce mutagenic effects in humans.

Reproductive Toxicity Data

- **Embryo toxicity** – This product is not reported to produce embryo toxic 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.

SECTION 12. ECOLOGICAL INFORMATION (non-mandatory)

Aquatic Toxicity – There is no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life.

Environmental Fate (Methyl Methacrylate)

There is no specific data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS (non-mandatory)

Waste Disposal Method

Dispose of properly in accordance with Federal, State, and Local regulations.

Disposal of Empty Containers

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.

SECTION 14. TRANSPORT INFORMATION (non-mandatory)

- **DOT / UN Shipping Name** – Polymer, NOI

SECTION 15. REGULATORY INFORMATION (non-mandatory)

SARA Reporting Requirements – Not available

SARA Threshold Planning Quantity – There are specific threshold planning quantities for the components of this product.

TSCA Inventory Status – The components of this product are listed on the TSCA inventory. For use in FDA regulated products only.

CERCLA Reportable Quantity (RQ): Not available

Other Federal Requirements – This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics).

Other Canadian Requirements – 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/NDSL. None of the components of this product are listed on the Priorities Substances List.

State Regulatory Information – This product may contain components that are covered under specific state criteria.

RISK STATEMENTS

- R36/37/38 – Irritating to eyes, respiratory system, and skin.

SAFETY STATEMENTS

- S3 – Keep in a cool place.
- S7 – Keep container tightly closed.
- S9 – Keep container in a well-ventilated place.
- S20 – When using do not eat or drink.
- S29 – Do not empty into drains.
- S37/39 – Wear suitable gloves and eye/face protection.

| |
|--|
| SECTION 16. OTHER INFORMATION (non-mandatory) |
|--|

HMIS Rating:

- **Health** – 1
- **Flammability** – 1
- **Reactivity** – 0
- **Personal Protective Equipment** – Gloves and safety glasses or Chemical Goggles.

NFPA Rating:

- **Health** – 1
- **Flammability** – 1
- **Reactivity** - 0

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

* = Chronic Health Hazard