



MSDS#: KIP071103-VAP

Material Safety Data Sheet

VERSACRYL ACRYLIC POLYMER

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Section I - Product and Company Identification

Product Name: VERSACRYL ACRYLIC POLYMER**Chemical Name:** N/A**Family:** Acrylic Polymer**Product Use:** Dental Polymer

Product #: 1014005, 1014006, 1014020, 1014021, 1014022, 1014023

MSDS Initial Approval Date: 07/31/2003

MSDS Prepared by: BSQ

Manufacturer: KEYSTONE INDUSTRIES

616 Hollywood Av, Cherry Hill, NJ 08002

Emergency Phone Numbers: (800) 535-5053**Information Contacts:** (856) 663-4700

Section II - Composition/Information on Ingredients

| Chemical Identity | CAS Numbers | EINECS# | INCI Name | Exposure | Limits | Carcinogen | % |
|--------------------|-------------|-----------|------------------|------------------|-------------------|------------|------|
| | | | | OSHA TWA/STEL | ACGIH TWA/STEL | | |
| Dibenzoyl Peroxide | 94-36-0 | 202-327-6 | Benzoyl Peroxide | 5 mg/m3 | 5 mg/m3 | 3/no/no | <0.2 |
| Rayon Fiber | 61788-77-0 | N/E | Rayon | N/DA | N/DA | N/DA | 0-1 |

N/E - None Established

N/DA - No Data Available

N/R - Not Reviewed

N/A - Not Applicable

Hazard Symbols: Xi**Risk Phrases:** R36/37/38**Safety Phrases:** S18, S22, S24/25, S38

This product is not considered hazardous by OSHA Hazard Communication Standard.

Section III - Hazards Identification

EMERGENCY OVERVIEW

This information is based on findings from related or similar materials.

- May cause allergic skin reaction.
- May cause eye irritation.
- Dust may cause irritation of the nose, throat, and lungs.
- This product may contain particulates, not otherwise classified (Nuisance Dust)

Potential Health Effects, Signs and Symptoms of Exposure:

Primary Route of Entry Eyes or skin (No absorption); inhalation of dust.**Eye** Higher concentration can irritate eyes. May cause eye irritation or damage.**Skin** Repeated or prolonged exposure may cause allergic skin rashes.**Ingestion** Higher concentration can irritate respiratory system.**Inhalation** Possible temporary discomfort due to inhalation of dust concentration above the permissible exposure limit. Dust may cause irritation of the nose, throat, and lungs.**Sub-Chronic Effects** Effects of Acute and Chronic Over Exposure: It is not known to cause significant health problems. It is considered an inert or nuisance dust. Avoid inhalation of dust. Keep dust out of eyes to prevent possible irritation.

NOTE: Refer to Section 11, Toxicological Information for Details

Section IV - First Aid Measures

First Aid for Eye Flush with plenty of water for 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid if symptoms persist.**First Aid for Skin** Wash thoroughly with soap and water. Obtain medical aid if discomfort persists.**First Aid for Inhalation** In case of exposure to a high concentration of polymer dust, remove person to fresh air. If breathing has stopped, administer artificial respiration and seek medical attention.**First Aid for Ingestion** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If

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conscious and alert, rinse mouth and drink 2 to 4 cupfuls of milk or water.

Section V - Fire Fighting Measures

| Flash Point (°F/°C) | Flammable Limit (vol%) | Auto-ignition Temperature (vol%) |
|------------------------------|--|-------------------------------------|
| 572°F/304°C (Tag Closed Cup) | LEL: 20 g/m ³ (dust cloud) UEL: N.A. | N/E |

Method:

| | |
|-----------------------------|---|
| Extinguishing Media: | Water spray, water foam, carbon dioxide, dry chemical. |
| Fire Fighting Instructions: | Avoid extinguishing methods that generate dust clouds. Water streams can disperse dust into air, producing a fire hazard and possible explosion hazard. Fire-fighters should wear self-contained breathing apparatus. |
| Unusual Hazards: | Polymer dust is combustible but not easily ignited. The explosive limits of the polymer particles suspended in air are approximately those of coal dust. |

Section VI - Accidental Release Measures

| | |
|-----------------------------|---|
| Spill or Release Procedures | Sweep up to avoid slipping hazard. Keep airborne particulates at a minimum when cleaning up spills. |
|-----------------------------|---|

Section VII - Handling and Storage

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|------------------|---|
| Handling | Observe precautions found on the label. Wash face and hands thoroughly with soap and water after handling and before eating, drinking or smoking. Avoid prolonged or repeated contact with skin. Avoid contamination. Use only with adequate ventilation. |
| Storage | Store in cool, dry place away from heat, sparks, flame and direct sunlight. Close container after each use. Ground all metal containers when transferring. Use explosion-proof equipment. Store away from combustibles and incompatible materials. |
| Explosion Hazard | Polymer dust is combustible, explosive limits of the polymer particles suspended in air are approximately those of coal dust. |

Section VIII - Exposure Controls / Personal Protective Equipment

| | |
|----------------------|---|
| Engineering Controls | Use good local exhaust at processing equipment, including buffers, sanders, grinders and polishers. High temperature processing equipment should be well ventilated. Use explosion-proof equipment. Provide ventilation if necessary to control exposure levels below airborne exposure limits. |
|----------------------|---|

Personal Protective Equipment

| | |
|------------------------|---|
| General | Dust collectors are recommended for handling powder in bulk. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132), or European Standard EN166 be conducted before using this product. Provide eye wash stations and safety showers. |
| Eye/ Face Protection | Use safety glasses and have eye flushing equipment immediately available. |
| Skin Protection | Minimize contamination by following good industrial practice. Although wearing gloves is an option, wearing nitrile, neoprene, pvc, latex or other impermeable gloves is recommended. |
| Respiratory Protection | A NIOSH/MSHA approved air purifying respirator with a minimum rating of N95 may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Follow OSHA respirator regulations found in 29 CFR 1910.134 or |

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European Standard EN 149.

Section IX - Physical and Chemical Properties

| | | | | | |
|---|----------------------------------|-----------|-------------------------|------------------|-------------------|
| Appearance | Odor & Odor Threshold | pH | Specific Gravity | Viscosity | % Volatile |
| Fine, white/pink powder w/ possibility of fine red fibers | Faint odor in bulk. | N/A | N/A | N/A | 0.0 |

| | | | | | | | |
|--|--------------------------------------|--|----------------------------|--------------------------|-----------------------------|-----------------|---|
| Boiling Point/ Freezing Point | Decomposition Temperature | Octanol/Water Partitioning Coefficient Log Po/w | Vapor Pressure: | Vapor Density | Evaporation Rate | Ignition | Solubility In Water (20°C) |
| N/A | 392°F/200°C | N/A | N/A | N/A | N/A | N/A | insoluble |

| | | |
|--------------------------------|--|---|
| Flash Point (°F/°C) | Flammable Limit (vol%) | Auto-ignition Temperature (vol%) |
| 580°F/304°C (Tag Closed Cup) | LEL: 20 g/m ³ (dust cloud) UEL: N.A. | N/E |

Section X - Stability and Reactivity**Stability:**

Stable

Hazardous Decomposition Products:

Methyl methacrylate monomers and Carbon Dioxide

Conditions to Avoid:

Heating above 200°C/392°F

Incompatibility (Materials to Avoid):

Strong oxidizing agents

Hazardous Polymerization:

will not occur

Section XI - Toxicological Information

| | | | | |
|------------------------------------|--------------------------------------|--|-------------------------------------|---------------------------------|
| Acute Oral Toxicity N/DA | Acute Dermal Toxicity N/DA | Acute Inhalation Toxicity N/DA | Irritation - skin mild | Irritation - Eye mild |
| Sensitization N/DA | Mutagenicity None | | Sub-chronic Toxicity None | |

Section XII - Ecological Information**Ecotoxicological Information**

| | | | | |
|-----------------------------------|--|------------------------------------|-------------------------|------------------------------------|
| Acute Toxicity to Fish | Acute Toxicity to Invertebrates | Acute Toxicity to Algae | Bioconcentration | Toxicity to Sewage Bacteria |
| N/DA | N/DA | N/DA | N/DA | N/DA |

Chemical Fate Information

| | |
|-------------------------------|------|
| Biodegradability | N/DA |
| Chemical Oxygen Demand | N/DA |

Section XIII - Disposal Considerations

May be disposed of in a landfill or incinerated. Follow Federal, State and Local regulations for disposal.

Section XIV - Transport Information

| | |
|-------------------------|------------------------|
| DOT (49 CFR 172) | |
| Proper Shipping Name: | Non-Regulated Material |

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| | |
|---|------------------------|
| Identification Number: | N/A |
| Marine Pollutant: | No |
| Special Provisions: | N/A |
| Emergency Response Guidebook (ERG) #: | N/A |
| IATA (DGR): | |
| Proper Shipping Name: | Non-Regulated Material |
| Class or Division: | N/A |
| UN or ID Number: | N/A |
| Packaging Instructions: | |
| Emergency Response Guidance (ICAO)#: | |
| IMO (IMDG): | |
| Proper Shipping Name: | Non-Regulated Material |
| Class or Division: | N/A |
| UN or ID Number: | N/A |
| Special Provisions & Stowage/Segregation: | None |
| Emergency Schedule (Ems)#: | |
| Other Information: | Flash point > 100°C |

Section XV - Regulatory Information

US Federal Regulations

| | |
|-------------------------------------|--|
| Clean Air Act: HAP/ODS | This product contains the following hazardous air pollutants (HAP's) or ozone depleting substances (ODS's), as defined by the U. S. Clean Air Act: • NONE |
| Clean Water Act: Priority Pollutant | This product contains the following chemicals listed under the U.S. Clean Water Act Priority Pollutant List: • NONE |
| FDA: Food Packaging Status | This product has not been cleared by the FDA for use in food packaging and/or other applications as an indirect food additive. |
| Occupational Safety and Health Act | This product is not considered a hazardous chemical under the OSHA Hazard Communication Standard. |
| RCRA | This product contains no chemicals considered to be hazardous waste under RCRA (40 CFR 261). |
| SARA Title III: Section 302 | This product contains no chemicals regulated under Sec. 302 as extremely hazardous substances. |
| SARA Title III: Section 304 | This product contains no chemicals regulated under Sec. 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List). |
| SARA Title III: Section 311-312: | This product does not contain hazardous substances under the OSHA Hazard Communication Standard, and is not regulated under Section 311-312 (40 CFR 370). |
| SARA Title III: Section 313: | This product contains the following chemicals outlined in SARA Title III: Section 313: • Benzoyl Peroxide CAS #94-36-0. |
| TSCA Section 8(b): Inventory: | This product contains chemicals listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements. |

State Regulations

| | |
|-----------------------|-------------------------------|
| CA Right-to-Know Law: | Benzoyl Peroxide CAS #94-36-0 |
| MA Right-to-Know Law: | Benzoyl Peroxide CAS #94-36-0 |
| NJ Right-to-Know Law: | Benzoyl Peroxide CAS #94-36-0 |
| PA Right-to-Know Law: | Benzoyl Peroxide CAS #94-36-0 |


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| | |
|-----------------------|-------------------------------|
| FL Right-to-Know Law: | Benzoyl Peroxide CAS #94-36-0 |
| MN Right-to-Know Law: | Benzoyl Peroxide CAS #94-36-0 |

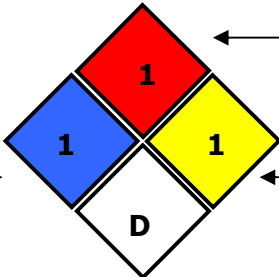
International Regulations

| | |
|--|---|
| CDSL: Canadian Inventory (on Canadian Transitional List) | Benzoyl Peroxide CAS #94-36-0 is on the DSL list. WHMIS = C, D2B, B4 |
| EINECS: European Inventory:  | Versacryl Acrylic Polymer: <ul style="list-style-type: none"> HAZARD SYMBOLS: Xi: Irritant RISK PHRASES: R36/37/38: Irritating to eyes, respiratory system and skin SAFETY PHRASES: S18: Handle and open container with care, S22: do not breath dust, S24/25: avoid contact with skin and eyes, S38: in case of insufficient ventilation, wear suitable respiratory equipment. |

Section XVI - Other Information

Hazard Rating System (Pictograms)

NFPA:



← **Flammability**

Health →

← **Reactivity**

HMIS:

1 **Health**

1 **Flammability**

1 **Reactivity**

*D

* - Respiratory protection may be necessary depending on conditions of use. Refer to Section VIII of this MSDS for respiratory protection guidelines.

OSHA PEL for nuisance dust: 15 mg/m³ (total dust)
5 mg/m³ (respirable dust)

ACGIH PEL for nuisance dust: 10 mg/m³

| | |
|--------------------------------------|--|
| Revised Sections since Last Version: | 07/31/2003 Initial Issue |
| | 11/02/2006 Added part numbers. |
| | 02/05/2008 Added part numbers |
| | 09/08/2011 Added Rayon Fibers to Section II. Appearance in Section IX to include possibility of fine red fibers. |

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SELF CURE MONOMER

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Section I - Product and Company Identification

Product Name: VERSACRYL PREMIX SELF CURE MONOMER

MSDS Approval Date: 12/15/2005

Chemical Name: Plasticized methacrylate monomer
Family: Acrylic Monomers

MSDS Prepared by: JRR

Manufacturer: KEYSTONE INDUSTRIES

616 Hollywood Ave, Cherry Hill, NJ 08002

Product Use: Organic Process Chemical

Emergency Phone Numbers: (800) 535-5053

Product #: 1014003, 1014013, 1014018

Information Contacts: (856) 663-4700

Section II – Composition/Information on Ingredients

| Chemical Identity | CAS Numbers | EINECS# | INCI Name | Exposure | Limits | Carcinogen | % |
|--------------------------------|--------------------------|-----------|------------------------|---------------------|---------------------|-------------------------------------|-----|
| | | | | OSHA TWA/STEL | ACGIH TWA/STEL | IARC/NTP/OSHA | |
| Methyl Methacrylate | 80-62-6 | 201-297-1 | N/DA | 100 ppm | 50 ppm/100 ppm | Group 3/no/no | <40 |
| Dibutyl Phthalate | 84-74-2 | 201-557-4 | Dibutyl phthalate | 5 mg/m ³ | N/E | Not Listed | <30 |
| Diethyl Phthalate | 117-81-7 | 204-211-0 | Diethylhexyl phthalate | N/E | 5 mg/m ³ | Group 3/Suspect/ Possible Select | <25 |
| n-Butyl Methacrylate | 97-88-1 | 202-615-1 | Butyl Methacrylate | N/E | N/E | Not listed | <5 |
| Ethylene Glycol Dimethacrylate | 97-90-5 | 202-617-2 | N/DA | N/E | N/E | Not Listed | <5 |
| nn,Dimethyl para toluidine | 99-97-8 | 202-805-4 | Dimethyltolylamine | N/E | N/E | Not listed | <1 |
| N/E - None Established | N/DA - No Data Available | | | | | | |
| N/R - Not Reviewed | N/A - Not Applicable | | | | | | |

Hazard Symbols: Xn F **Risk Phrases:** R11, R36/37/38, R40, R43 **Safety Phrases:** S2, S9, S16, S24/25, S29, S36/37/39, S45

Section III - Hazards Identification

EMERGENCY OVERVIEW

This information is based on findings from related or similar materials.

- Danger! Flammable liquid and vapor.**
- Known Sensitizer.
- May cause eye irritation.
- May cause respiratory tract irritation.



- May cause allergic skin reaction.
- Light and Air sensitive.
- Target Organs: Kidneys, central nervous system, liver.
- Possible cancer hazard, read MSDS for further details.

Potential Health Effects, Signs and Symptoms of Exposure:

| | |
|---|--|
| Primary Route of Entry | Inhalation , skin , eyes |
| Eye | Vapor concentrations may cause irritation of eyes. Liquid contact with eyes can cause irritation and possible corneal damage. |
| Skin | Liquid concentration may cause severe skin irritation. Repeated or prolonged contact may cause allergic skin rashes, itching and swelling which becomes evident on re-exposure to this product. |
| Ingestion | May cause central nervous system depression, kidney damage, and liver damage. May cause irritation, a burning sensation of the mouth, throat, respiratory tract, and abdominal pain. |
| Inhalation | High vapor concentrations may irritate the respiratory system. Prolonged exposure can lead to headaches, nausea, drowsiness, unconsciousness, and coma. |
| Sub-Chronic Effects (mixture) | Prolonged or repeated skin contact may cause sensitization dermatitis and possible destruction and/or ulceration. May cause reproductive and fetal effects. Repeated exposure may cause tingling in the extremities and other nervous system abnormalities. |
| Chronic Effects, Diethyl Phthalate (DEHP) | DEHP toxicity appears to be a high-dose phenomenon readily demonstrable in some, but not all rodent species and strains. Liver toxicity, so characteristic of rodent responses to DEHP, appears to be irrelevant to humans. The carcinogenic response of DEHP has been demonstrated only in one strain of rat and mouse and does not appear to be a feature of toxicity in higher order mammals, especially humans. Reproductive and developmental toxicity, likewise, appears to be limited to high-dose effects seen in rodent testing. The relevance to human testing has not been established. |

NOTE: Refer to Section 11, Toxicological Information for Details

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SELF CURE MONOMER

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Section IV - First Aid Measures

| | |
|--------------------------|---|
| First Aid for Eye | If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 min. while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention. |
| First Aid for Skin | Wash thoroughly with soap and water. Remove contaminated clothing. Get medical help if discomfort persists. Wash clothing before use. |
| First Aid for Inhalation | Remove to fresh air. If having breathing difficulty, give oxygen. If breathing has stopped, give artificial respiration. Get medical help if discomfort persists. |
| First Aid for Ingestion | Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2 to 4 cupfuls of milk or water. |

Section V - Fire Fighting Measures

| Flash Point (°F/°C) | Flammable Limit (vol%) | Auto-ignition Temperature (vol%) |
|---------------------------|---------------------------|-------------------------------------|
| Tag Closed Cup: 51°F/10°C | LEL: 2.12% UEL: 12.5% | 815°F/435°C |

Method:

| | |
|-----------------------------|--|
| Extinguishing Media: | Foam, Carbon Dioxide, Dry Chemical. |
| Fire Fighting Instructions: | Wear self-contained breathing apparatus and full protective gear. Water may be ineffective unless used as a fine spray or fog. Use water spray to cool the exposed containers of methacrylate monomer. |
| Unusual Hazards: | Vapors may travel to source of ignition and flash back. Avoid ignition sources or excessive temperatures. Heat can induce polymerization with rapid release of energy. Closed containers may rupture explosively. Spontaneous polymerization may occur on prolonged aging. |

Section VI - Accidental Release Measures

| | |
|-----------------------------|--|
| Spill or Release Procedures | Eliminate all sources of heat and ignition. Use absorbent material for spills and dike it, wash spill material into retaining containers. Place containers in a well ventilated area. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as sawdust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. |
|-----------------------------|--|

Section VII - Handling and Storage

| | |
|------------------|---|
| Handling | Keep away from heat, sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Ground all metal containers when transferring and use explosion-proof equipment. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling. |
| Storage | Store in a cool, dry area. Keep container closed when not in use. Store at ambient temperatures out of direct sunlight. Store in a well ventilated place. Store in accordance with National Fire Protection Association recommendations. Maintain air space inside storage containers. Inhibitor requires air (oxygen) contact to function. Check inhibitor levels after 3 months, maintain original level. |
| Explosion Hazard | Avoid ignition sources or excessive temperatures. Heat can induce polymerization with rapid release of energy. Closed containers may rupture explosively. Spontaneous polymerization may occur on prolonged aging. |

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SELF CURE MONOMER

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Section VIII - Exposure Controls / Personal Protective Equipment

Engineering Controls Facilities storing or utilizing this material should be equipped with an eye facility and safety shower. Use process enclosures local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.
Methyl methacrylate: IDLH = 1000 ppm via NIOSH standards.
Dibutyl Phthalate: IDLH = 4000 mg/m³ via NIOSH standards.

Personal Protective Equipment

General To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132), or European Standard EN166 be conducted before using this product. Provide eye wash stations and safety showers. Wear impervious clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC.

Eye/ Face Protection Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying material.

Skin Protection Use impermeable clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC.

Respiratory Protection A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Section IX - Physical and Chemical Properties

| Appearance | Odor & Odor Threshold | pH | Specific Gravity | Viscosity | % Volatile |
|-------------------------|---------------------------|-----|------------------|------------|------------|
| Clear, pale blue liquid | Acrid, fruity OT = N/D | N/D | (H2O=1): 0.94 | Like water | W/W %: 99+ |

| Boiling Point/ Freezing Point | Decomposition Temperature | Octanol/Water Partitioning Coefficient Log Po/w | Vapor Pressure: | Vapor Density | Evaporation Rate | Ignition | Solubility In Water (20°C) |
|-------------------------------------|------------------------------|--|----------------------|------------------|----------------------------|----------|-----------------------------------|
| 214°F/101°C N/DA | N/A | N/DA | mm Hg : 29 @ 20°C | (Air =1): 3.5 | (Butyl Acetate= 1): 3.0 | N/DA | Moderate, 1.6gm/100gm @20°C |

| Flash Point (°F/°C) | Flammable Limit (vol%) | Auto-ignition Temperature (vol%) |
|---------------------------|---------------------------|-------------------------------------|
| Tag Closed Cup: 68°F/20°C | LEL: 2.0% UEL: 12.5% | 790°F/421°C |

Section X - Stability and Reactivity

| | |
|---|--|
| Stability: Stable Hazardous Decomposition Products: Oxides of carbon when burned. Conditions to Avoid: Temperatures above 40°C, oxidizing or reducing agents, peroxides and amines, storage in absence of inhibitor, and inadvertent addition of catalyst. Avoid aging and contamination. | Incompatibility (Materials to Avoid): Reducing and oxidizing agents and UV light. Hazardous Polymerization: May occur |
|---|--|

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Section XI - Toxicological Information

| Acute Oral Toxicity | Acute Dermal Toxicity | Acute Inhalation Toxicity | Irritation - skin | Irritation - Eye |
|-------------------------------------|--|--|-------------------|------------------|
| Oral(Rat) LD50: 2297gm/kg (mixture) | Dermal (rabbit) LD50: 8125mg/kg (mixture) | Inhalation (Rat) LC50 >12,500 to 16,500ppm for 0.5 hours (MMA) | N/DA | Slight |
| Sensitization | Mutagenicity | Sub-chronic Toxicity | | |
| N/DA | Hamster, ovary, fibroblast, oral(cytogenetic analysis): 887 mg/l (mixture) | N/DA | | |

Section XII - Ecological Information

Ecotoxicological Information

| Acute Toxicity to Fish | Acute Toxicity to Invertebrates | Acute Toxicity to Algae | Bioconcentration | Toxicity to Sewage Bacteria |
|--|---------------------------------|-------------------------|------------------|-----------------------------|
| 96 hour LC50 (mixture): fathead minnows: 100-1000 ppm goldfish: 58 ppm | N/DA | N/DA | N/DA | N/DA |

Chemical Fate Information

| | |
|------------------------|------|
| Biodegradability | N/DA |
| Chemical Oxygen Demand | N/DA |

Section XIII - Disposal Considerations

Dispose of diking materials and absorbent in compliance with State, Local, and Federal regulations. Residual vapors may explode on ignition; do not cut, drill, or weld on or near the container. Mix with compatible chemical which is less flammable and incinerate. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section XIV - Transport Information

| | |
|--|--|
| DOT (49 CFR 172) | |
| Proper Shipping Name: | Flammable liquids, n.o.s., (methyl methacrylate, dibutyl phthalate), 3, UN1993, PGII |
| Identification Number: | UN1993 |
| Marine Pollutant: | No |
| Special Provisions: | T8, T31 |
| Emergency Response Guidebook (ERG) #: | 128 |
| IATA (DGR): | |
| Proper Shipping Name: | Flammable liquids, n.o.s., (methyl methacrylate, dibutyl phthalate), 3, UN1993, PGII |
| Class or Division: | 3 |
| UN or ID Number: | UN1993 |
| Packaging Instructions: | |
| Emergency Response Guidance (ICAO)#: | 3L |
| IMO (IMDG): | |
| Proper Shipping Name: | Flammable liquids, n.o.s., (methyl methacrylate, dibutyl phthalate), 3, UN1993, PGII |
| Class or Division: | 3.2 |
| UN or ID Number: | UN1993 |
| Special Provisions & Stowage/Segregation: | None |
| Emergency Schedule (EmS)#: | |

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Other Information:

Flash point = 10°C

Section XV - Regulatory Information

US Federal Regulations

| | |
|---|--|
| Clean Air Act: HAP/ODS | <p>This product contains the following hazardous air pollutants (HAP) as defined by the U.S. Clean Air Act:</p> <ul style="list-style-type: none"> Methyl methacrylate, CAS# 80-62-6 Dibutyl phthalate, CAS# 84-74-2 Dioctyl phthalate, CAS# 117-81-7 <p>This product contains no Class 1 or Class 2 ODS.</p> |
| Clean Water Act: Priority Pollutant/Hazardous Substance | <p>This product contains the following Hazardous Substances as defined by the CWA:</p> <ul style="list-style-type: none"> Methyl methacrylate, CAS# 80-62-6 Dibutyl phthalate, CAS# 84-74-2 <p>This product contains the following substances that are a Priority Pollutant:</p> <ul style="list-style-type: none"> Dioctyl phthalate, CAS# 117-81-7. <p>This product does not contain any substances that are a Toxic Pollutant under the CWA.</p> |
| FDA: Food Packaging Status | <p>This product has not been cleared by the FDA for use in food packaging and/or other applications as an indirect food additive.</p> |
| Occupational Safety and Health Act | <p>This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard. Its hazards are:</p> <ul style="list-style-type: none"> Immediate (acute) health hazard Fire hazard Chronic (delayed) health hazard |
| RCRA | <p>This product contains chemicals considered to be hazardous waste under RCRA (40 CFR 261):</p> <ul style="list-style-type: none"> Methyl methacrylate CAS# 80-62-6, RCRA Code U162 Dibutyl phthalate, CAS# 84-74-2, RCRA Code U069 Dioctyl phthalate, CAS# 117-81-7, RCRA Code U028 Characteristic of Ignitability: RCRA Code: D001 |
| SARA Title III: Section 302 (TPQ) | <p>This product contains no chemicals regulated under Sec. 302 as extremely hazardous substances that carry a TPQ.</p> |
| SARA Title III: Section 302 (RQ) | <p>This product contains chemicals regulated under Section 302 as extremely hazardous chemicals for emergency release notification ("CERCLA" List):</p> <ul style="list-style-type: none"> Methyl methacrylate CAS# 80-62-6, RQ(Lbs): 1000 Dibutyl phthalate, CAS# 84-74-2, RQ(Lbs): 10 Dioctyl phthalate, CAS# 117-81-7, RQ(Lbs): 100 |
| SARA Title III: Section 311-312: | <p>This product is considered hazardous under the OSHA Hazard Communication Standard and is regulated under Section 311-312 (40 CFR 370). Its hazards are:</p> <ul style="list-style-type: none"> Immediate (acute) health Fire hazard Delayed (chronic) health hazard |
| SARA Title III: Section 313: | <p>This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:</p> <ul style="list-style-type: none"> Methyl methacrylate, CAS# 80-62-6 Dibutyl phthalate, CAS# 84-74-2 Dioctyl phthalate, CAS# 117-81-7 |

Material Safety Data Sheet **VERSACRYL PREMIX**

SELF CURE MONOMER



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| | |
|--------------------------------|--|
| TSCA Section 8(b): Inventory: | This product contains chemicals that are on the TSCA list. |
| TSCA Significant New Use Rule: | None of the chemicals in this material have a SNUR under TSCA. |

State Regulations

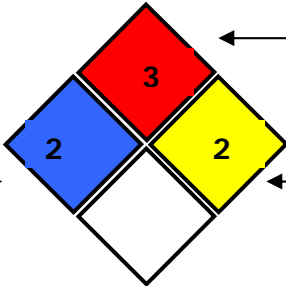
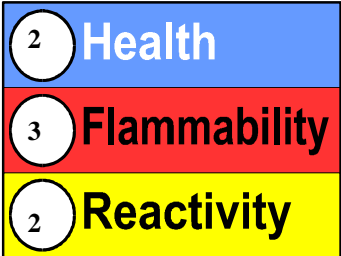
| | |
|-----------------------|--|
| CA Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6, Dibutyl phthalate, CAS# 84-74-2, Dioctyl phthalate, CAS# 117-81-7 California No Significant Risk Level: Dioctyl phthalate, CAS# 117-81-7 = 80 µg/day California Safe Drinking Water Act: The following statement(s) is(are) made in order to comply with the CSWDA: WARNING: This product contains Dioctyl Phthalate, a chemical known to the state of California to cause cancer. |
| MA Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6, Dibutyl phthalate, CAS# 84-74-2, Dioctyl phthalate, CAS# 117-81-7, Butyl methacrylate, CAS# 97-88-1 |
| NJ Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6, Dibutyl phthalate, CAS# 84-74-2, Dioctyl phthalate, CAS# 117-81-7, Butyl methacrylate, CAS# 97-88-1 |
| PA Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6, Dibutyl phthalate, CAS# 84-74-2, Dioctyl phthalate, CAS# 117-81-7, Butyl methacrylate, CAS# 97-88-1 |
| FL Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6, Dibutyl phthalate, CAS# 84-74-2, Dioctyl phthalate, CAS# 117-81-7, Butyl methacrylate, CAS# 97-88-1 |
| MN Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6, Dibutyl phthalate, CAS# 84-74-2, Dioctyl phthalate, CAS# 117-81-7 |

International Regulations

| | |
|--|---|
| CDSL: Canadian Inventory (on Canadian Transitional List) | Methyl methacrylate, CAS# 80-62-6 is on the DSL List. WHMIS = B2, D2B. Dibutyl phthalate, CAS# 84-74-2 is on the DSL List. WHMIS = D2B Dioctyl phthalate, CAS# 117-81-7 is on the DSL List. WHMIS = D2A Butyl Methacrylate, CAS# 97-88-1 is on the DSL List. WHMIS = B2, D2A, F Ethylene glycol dimethacrylate, CAS# 97-90-5 is on the DSL List. WHMIS = n/da N,N-dimethyl-p-toluidine CAS# 99-97-8 is on the DSL List. WHMIS = n/da |
| EINECS: European Inventory:   | <ul style="list-style-type: none"> HAZARD SYMBOLS: Xn, F: Harmful, Highly Flammable RISK PHRASES: R11: highly flammable, R36/37/38: Irritating to eyes, respiratory system and skin, R40: Possible risks of irreversible effects, R43: May cause sensitization by skin contact SAFETY PHRASES: S2: Keep out of the reach of children, S9: keep container in a well ventilated place, S16: keep away from sources of ignition- no smoking, S24/25: Avoid contact with skin & eyes, 29: do not empty into drains, S36/37/39: wear suitable protective clothing, gloves and eye/face protection, S45: In case of accident or if you feel unwell, seek medical advise immediately (show the label where possible) |

Section XVI - Other Information

Hazard Rating System (Pictograms)

| | |
|---|---|
| NFPA: | HMIS: |
|  |  |

Material Safety Data Sheet **VERSACRYL PREMIX**

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*- Gloves and Safety Glasses or Chemical Splash Goggles

| | |
|--------------------------------------|---------------------------|
| Revised Sections since Last Version: | Heading, MSDS name change |
| 12/14/11 Review Date | No content changes made |

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Material Safety Data Sheet

VERSACRYL SEALANT

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Section 1 - Identification of the Substance/Preparation and of the Company/Undertaking

Product Name: VERSACRYL SEALANT
Chemical Name: LACQUER

| | |
|-----------------------------|------------|
| MSDS Initial Approval Date: | 06/02/2008 |
| MSDS Prepared by: | JRR |

Family: SEALANT

Manufacturer: KEYSTONE INDUSTRIES
616 Hollywood Ave. Cherry Hill, NJ 08002

Product Use: DENTURE SEALANT

Emergency Phone Numbers: (800) 535 - 5053

Product #: Varies

Information Contacts: (856)-663-4700

Section 2 - Composition/Information on Ingredients

| Chemical Identity | CAS Numbers | EINECS# | INCI Name | Exposure OSHA TWA/STEL | Limits ACGIH TWA/ST EL | Carcinogen IARC/NTP/OSHA | % |
|---------------------|-------------|-----------|-----------|------------------------------|---------------------------------|-----------------------------|-------|
| Methyl Ethyl Ketone | 78-93-3 | 201-159-0 | MEK | 200 ppm | 200 ppm | Not Listed | 85-95 |

N/E - None Established
N/R - Not Reviewed

N/DA - No Data Available
N/A - Not Applicable

Hazard Symbols: F, Xi **Risk Phrases:** R11, R36, R66, R67 **Safety Phrases:** S2, S9, S16

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

This information is based on findings from related or similar materials.

- **Flammable liquid and vapor!**
- May cause allergic skin reaction.
- May cause eye irritation.
- May cause respiratory tract irritation.



Potential Health Effects, Signs and Symptoms of Exposure:

| | |
|------------------------|--|
| Primary Route of Entry | Inhalation, skin contact, eye contact |
| Eye | Exposure causes eye irritation. Symptoms include stinging, tearing, redness and swelling. |
| Skin | Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking, and skin burns. |
| Ingestion | Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. |
| Inhalation | Vapor and mist are irritating to mucous membrane. Breathing small amounts during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits. |
| Sub-Chronic Effects | It may cause headaches, nausea, vomiting and narcotic effect if over-exposed. |

NOTE: Refer to Section 11, Toxicological Information for Details

Section 4 - First Aid Measures

| | |
|--------------------------|--|
| First Aid for Eye | If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention. |
| First Aid for Skin | Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. |
| First Aid for Inhalation | Remove to fresh air. If breathing is difficult, administer oxygen. If symptoms persist, seek medical attention. |

Material Safety Data Sheet

VERSACRYL SEALANT

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First Aid for Ingestion If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Seek medical attention for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Section 5 - Fire Fighting Measures

| Flash Point (°F/°C) | Flammable Limit (vol%) | Auto-ignition Temperature (vol%) |
|-------------------------|---------------------------|-------------------------------------|
| TAG Closed: 24.8°F/-4°C | 400 ppm | N/DA |

Method:

Extinguishing Media: Foam, dry chemical, cold water spray.

Fire Fighting Instructions: Wear self-contained breathing apparatus and protective clothing. **USE WATER WITH CAUTION.** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a safe distance and protected location.

Unusual Hazards: Flammable. When exposed to heat and flame, material is a fire explosion hazard. It may produce toxic products CO, Carbon dioxide and oxides of nitrogen. Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.

Section 6 - Accidental Release Measures

Spill or Release Procedures Eliminate all sources of heat and ignition. Use absorbent material for spills and dike it, wash spill material into retaining containers. Place containers in a well ventilated area. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as sawdust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. EU Regulations require the consultation of Directive 98/24/EC. If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

Section 7 - Handling and Storage

Handling Keep containers cool and dry. Keep away from heat, light and ignition sources. Avoid breathing high vapor concentrations. Avoid prolonged or repeated contact with skin. Use only with adequate ventilation. Wash thoroughly after handling.

Storage Store in well ventilated area. Store @ 70°F+/- 15°F (21°C+/-8°C), allow some air space above liquid level. Keep containers closed while not in use.

Explosion Hazard Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Section 8 - Exposure Controls / Personal Protective Equipment

Engineering Controls Facilities storing or utilizing this material should be equipped with an eye facility and safety shower. Use process enclosures local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

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VERSACRYL SEALANT

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Personal Protective Equipment

| | |
|------------------------|--|
| General | To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132), or European Standard EN166 be conducted before using this product. Provide eye wash stations and safety showers. Wear impervious clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC. |
| Eye/ Face Protection | Use impermeable clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC. |
| Skin Protection | Wear resistant gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots. |
| Respiratory Protection | A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. |

Section 9 - Physical and Chemical Properties

| Appearance | Odor & Odor Threshold | pH | Specific Gravity | Viscosity | % Volatile |
|------------------|-----------------------|----|----------------------------|----------------|------------|
| Colorless Liquid | Acetone-like Odor | NA | (H ₂ O=1):0.805 | 0.52cSt (25°C) | W/W %: 99+ |

| Boiling Point/ Freezing Point | Decomposition Temperature | Octanol/Water Partitioning Coefficient Log Po/w | Vapor Pressure: | Vapor Density | Evaporation Rate | Ignition | Solubility In Water (20°C) |
|----------------------------------|------------------------------|--|--------------------|------------------|---------------------|----------|----------------------------------|
| 174.2° F(79°C) | N/DA | N/DA | N/A | (Air=1): 1 | N/A | N/A | 22.6% g/l (25 deg C) |

| Flash Point (°F/°C) | Flammable Limit (vol%) | Auto-ignition Temperature (vol%) |
|-------------------------|---------------------------|-------------------------------------|
| TAG Closed: 24.8°F/-4°C | 400 ppm | N/DA |

Section 10 - Stability and Reactivity

| | |
|--|--|
| Stability: Stable Hazardous Decomposition Products: Heated material produce NO ₂ , CO ₂ , CO Conditions to Avoid: Heat, flame, ignition sources. | Incompatibility (Materials to Avoid): Avoid oxidizing agents, acids & bases (heat) Hazardous Polymerization: Will not occur |
|--|--|

Section 11 - Toxicological Information

| Acute Oral Toxicity | Acute Dermal Toxicity | Acute Inhalation Toxicity | Irritation - skin | Irritation - Eye |
|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |

Further hazardous properties cannot be excluded. The product should be handled with care when dealing with chemicals.

| Sensitization | Mutagenicity | Sub-chronic Toxicity |
|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available |

Section 12 - Ecological Information

Ecotoxicological Information

| Acute Toxicity To Fish | Acute Toxicity to Invertebrates | Acute Toxicity to Algae | Bioconcentration | Toxicity to Sewage Bacteria |
|---------------------------|------------------------------------|----------------------------|--------------------------|-----------------------------|
| No information available | No information available | No information available | No information available | No information available |

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VERSACRYL SEALANT

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Chemical Fate Information

| | |
|-------------------------------|--------------------------|
| Biodegradability | No information available |
| Chemical Oxygen Demand | No information available |

To the best of our knowledge, the ecotoxicological and chemical fate properties have not been thoroughly investigated.
Do not allow to enter drinking water supplies, wastewater, or soil.

Section 13 - Disposable Considerations

Dispose of diking materials and absorbent in compliance with State, Local, and Federal regulations. Residual vapors may explode on ignition; do not cut, drill, or weld on or near the container. Mix with compatible chemical which is less flammable and incinerate.

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements. For EU Member States, please refer to any relevant Community provisions relating to waste. In their absence, it is useful to remind the user that national or regional provisions may be in force.

Section 14 - Transport Information

| | |
|--|---|
| DOT (49 CFR 172) | |
| Proper Shipping Name: | UN1993, Flammable liquids, N.O.S., (methyl ethyl ketone), 3, PGII |
| Identification Number: | UN1993 |
| Marine Pollutant: | No |
| Special Provisions: | T8, T31 |
| Emergency Response Guidebook (ERG) #: | 128 |
| IATA (DGR): | |
| Proper Shipping Name: | UN1993, Flammable liquids, N.O.S., (methyl ethyl ketone), 3, PGII |
| Class or Division: | 3 |
| UN or ID Number: | UN1993 |
| Packaging Instructions: | |
| Emergency Response Guidance (ICAO)#: | |
| IMO (IMDG): | |
| Proper Shipping Name: | UN1993, Flammable liquids, N.O.S., (methyl ethyl ketone), 3, PGII |
| Class or Division: | 3.2 |
| UN or ID Number: | UN1993 |
| Special Provisions & Stowage/Segregation: | None |
| Emergency Schedule (EmS)#: | |
| Other Information: | Flash point = 24.8°C |

Section 15 - Regulatory Information

US Federal Regulations

| | |
|-------------------------------------|---|
| Clean Air Act: HAP/ODS | This product contains the following hazardous air pollutants (HAPs): <ul style="list-style-type: none"> Methyl Ethyl Ketone, CAS# 78-93-3 There are no ODS's (ozone depleting substances) as defined by the U. S. Clean Air Act. |
| Clean Water Act: Priority Pollutant | This product contains the following chemicals listed under the U. S. Clean Water Act Priority Pollutant and Hazardous Substance List: <ul style="list-style-type: none"> NONE |
| FDA: Food Packaging Status | This product has not been cleared by the FDA for use in food packaging and / or other applications as an indirect food additive. |
| Occupational Safety and Health Act | This product is considered to be hazardous under the OSHA Hazard Communication Standard. Its hazards are: <ul style="list-style-type: none"> Immediate (acute) health hazard Fire hazard |

Material Safety Data Sheet

VERSACRYL SEALANT



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| | |
|---|--|
| RCRA | This product contains chemicals considered to be hazardous waste under RCRA (40 CFR 261): <ul style="list-style-type: none"> Methyl Ethyl Ketone, CAS# 78-93-3, RCRA Codes D035, U159 May contain Characteristic of Ignitability: RCRA Code: D001 |
| SARA Title III: Section 302 (TPQ) | This product contains no chemicals regulated under Section 302 as extremely hazardous substances. |
| SARA Title III: Section 302 (RQ) | This product contains chemicals regulated under Section 302 as extremely hazardous chemicals for emergency release notification ("CERCLA" List): <ul style="list-style-type: none"> Methyl Ethyl Ketone, CAS# 78-93-3, RQ (Lbs): 5000 |
| SARA Title III: Section 311-312: | This product is considered to be hazardous under the OSHA Hazard Communication Standard and is regulated under Section 311-312 (40 CFR 370). Its hazards are: <ul style="list-style-type: none"> Immediate (acute) health hazard Fire hazard |
| SARA Title III: Section 313: | This product contains the following chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: <ul style="list-style-type: none"> Methyl Ethyl Ketone, CAS# 78-93-3 |
| TSCA Section 8(b): Inventory: TSCA Significant New Use Rule: | This product contains chemicals listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements. None of the chemicals in this material have a SNUR under TSCA. |

State Regulations

| | |
|--|---|
| CA Right-to-Know Law: California No Significant Risk Level: | Methyl Ethyl Ketone CAS 78-93-3 NONE |
| MA Right-to-Know Law: | Methyl Ethyl Ketone CAS 78-93-3 |
| NJ Right-to-Know Law: | Methyl Ethyl Ketone CAS 78-93-3 |
| PA Right-to-Know Law: | Methyl Ethyl Ketone CAS 78-93-3 |
| FL Right-to-Know Law: | Methyl Ethyl Ketone CAS 78-93-3 |
| MN Right-to-Know Law: | Methyl Ethyl Ketone CAS 78-93-3 |

International Regulations

| | |
|---|---|
| CDSL: Canadian Inventory (on Canadian Transitional List) | Methyl Ethyl Ketone CAS 78-93-3 is on the DSL list. WHMIS = B2, D2A |
| EINECS: European Inventory:   | <ul style="list-style-type: none"> HAZARD SYMBOLS: Xn, F: Harmful, Highly Flammable RISK PHRASES: R11: highly flammable, R36: irritating to eyes, R66: Repeated exposure may cause skin dryness or cracking, R67: Vapors may cause drowsiness or dizziness SAFETY PHRASES: S2: Keep out of reach of children, S9: Keep container in a well ventilated place, S16: Keep away from sources of ignition. |

Material Safety Data Sheet

VERSACRYL SEALANT

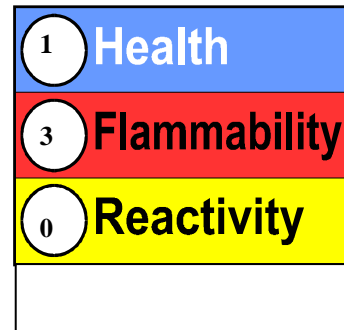
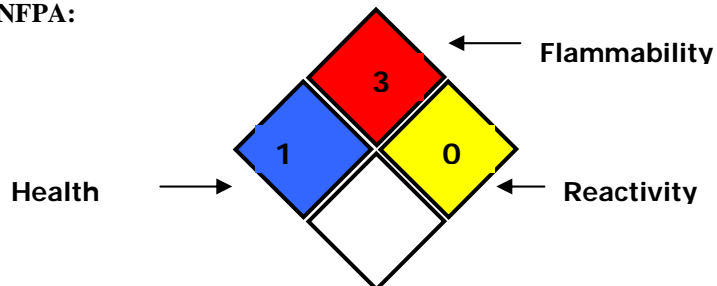
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Section 16 - Other Information

Hazard Rating System (Pictograms)

NFPA:

HMIS:



| | |
|--------------------------------------|------------------|
| Revised Sections since Last Version: | 06/02/08 Initial |
| | |

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Material Safety Data Sheet

VERSACRYL

SELF CURE HARDENING LIQUID

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Section I - Product and Company Identification

Product Name: VERSACRYL SELF CURE HARDENING LIQUID

MSDS# KIM071103-
: VSC

Chemical Name: Methacrylate monomer

MSDS Approval
Date: 1/07/2004

MSDS Prepared BSQ
by:

Family: Acrylic Monomers

Manufacturer: KEYSTONE INDUSTRIES

616 Hollywood Ave, Cherry Hill, NJ 08002

Product Use: Organic Process Chemical

Emergency Phone Numbers: (800) 535-5053

Product #: 1014001, 1014011, 1014016

Information Contacts: (856) 663-4700

Section II – Composition/Information on Ingredients

| Chemical Identity | CAS Numbers | EINECS# | INCI Name | Exposure OSHA TWA/STEL | Limits ACGIH TWA/STEL | Carcinogen IARC/NTP/OSHA | % |
|--|-------------|--|--------------------|------------------------------|-----------------------------|-----------------------------|-----|
| Methyl Methacrylate | 80-62-6 | 201-297-1 | N/DA | 100 ppm | 50 ppm/100 ppm | Group 3/no/no | >85 |
| Ethylene Glycol Dimethacrylate | 97-90-5 | 202-617-2 | N/DA | N/E | N/E | Not Listed | <15 |
| N,N-Dimethyl-P-Toluidine | 99-97-8 | 202-805-4 | Dimethyltolylamine | N/E | N/E | Not Listed | <1 |
| N/E - None Established N/R - Not Reviewed | | N/DA - No Data Available N/A - Not Applicable | | | | | |

Hazard Symbols: Xi F

Risk Phrases: R11, R36/37/38, R43

Safety Phrases: S9, S16, S29, S33, S36/37/39, S45

Section III - Hazards Identification

EMERGENCY OVERVIEW

This information is based on findings from related or similar materials.

- **Danger! Flammable liquid and vapor.**
- Known Sensitizer.
- May cause eye irritation.
- May cause respiratory tract irritation.



- May cause allergic skin reaction.
- Light and Air sensitive.
- Target Organs: Kidneys, central nervous system, liver.
-

Potential Health Effects, Signs and Symptoms of Exposure:

| | |
|------------------------|--|
| Primary Route of Entry | Inhalation , skin , eyes |
| Eye | Vapor concentrations may cause irritation of eyes. Liquid contact with eyes can cause irritation and possible corneal damage. |
| Skin | Liquid concentration may cause severe skin irritation. Repeated or prolonged contact may cause allergic skin rashes, itching and swelling which becomes evident on re-exposure to this product. |
| Ingestion | May cause central nervous system depression, kidney damage, and liver damage. May cause irritation, a burning sensation of the mouth, throat, respiratory tract, and abdominal pain. |
| Inhalation | High vapor concentrations may irritate the respiratory system. Prolonged exposure can lead to headaches, nausea, drowsiness, unconsciousness, and coma. |
| Sub-Chronic Effects | Prolonged or repated skin contact may cause sensitization dermatitis and possible destruction and/or ulceration. May cause reproductive and fetal effects. Repeated exposure may cause tingling in the extremities and other nervous system abnormalities. |

NOTE: Refer to Section 11, Toxicological Information for Details

Material Safety Data Sheet

VERSACRYL

SELF CURE HARDENING LIQUID

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Section IV - First Aid Measures

| | |
|--------------------------|---|
| First Aid for Eye | If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 min. while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention. |
| First Aid for Skin | Wash thoroughly with soap and water. Remove contaminated clothing. Get medical help if discomfort persists. Wash clothing before use. |
| First Aid for Inhalation | Remove to fresh air. If having breathing difficulty, give oxygen. If breathing has stopped, give artificial respiration. Get medical help if discomfort persists. |
| First Aid for Ingestion | Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2 to 4 cupfuls of milk or water. |

Section V - Fire Fighting Measures

| Flash Point (°F/°C) | Flammable Limit (vol%) | Auto-ignition Temperature (vol%) |
|---------------------------|---------------------------|-------------------------------------|
| Tag Closed Cup: 51°F/10°C | LEL: 2.12% UEL: 12.5% | 815°F/435°C |

Method:

| | |
|-----------------------------|--|
| Extinguishing Media: | Foam, Carbon Dioxide, Dry Chemical. |
| Fire Fighting Instructions: | Wear self-contained breathing apparatus and full protective gear. Water may be ineffective unless used as a fine spray or fog. Use water spray to cool the exposed containers of methacrylate monomer. |
| Unusual Hazards: | Vapors may travel to source of ignition and flash back. Avoid ignition sources or excessive temperatures. Heat can induce polymerization with rapid release of energy. Closed containers may rupture explosively. Spontaneous polymerization may occur on prolonged aging. |

Section VI - Accidental Release Measures

| | |
|-----------------------------|--|
| Spill or Release Procedures | Eliminate all sources of heat and ignition. Use absorbent material for spills and dike it, wash spill material into retaining containers. Place containers in a well ventilated area. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as sawdust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. |
|-----------------------------|--|

Section VII - Handling and Storage

| | |
|----------|---|
| Handling | Keep away from heat, sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Ground all metal containers when transferring and use explosion-proof equipment. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling. |
|----------|---|

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|------------------|---|
| Storage | Store in a cool, dry area. Keep container closed when not in use. Store at ambient temperatures out of direct sunlight. Store in a well ventilated place. Store in accordance with National Fire Protection Association recommendations. Maintain air space inside storage containers. Inhibitor requires air (oxygen) contact to function. Check inhibitor levels after 3 months and return to original level. |
| Explosion Hazard | Avoid ignition sources or excessive temperatures. Heat can induce polymerization with rapid release of energy. Closed containers may rupture explosively. Spontaneous polymerization may occur on prolonged aging. |

Section VIII - Exposure Controls / Personal Protective Equipment

| | |
|----------------------|---|
| Engineering Controls | Facilities storing or utilizing this material should be equipped with an eye facility and safety shower. Use process enclosures local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Methyl methacrylate: IDLH = 1000 ppm via NIOSH standards. |
|----------------------|---|

Personal Protective Equipment

| | |
|------------------------|--|
| General | To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132), or European Standard EN166 be conducted before using this product. Provide eye wash stations and safety showers. Wear impervious clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC. |
| Eye/ Face Protection | Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying material. |
| Skin Protection | Use impermeable clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC. |
| Respiratory Protection | A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. |

Section IX - Physical and Chemical Properties

| Appearance | Odor & Odor Threshold | pH | Specific Gravity | Viscosity | % Volatile |
|-------------------------|---------------------------|-----|------------------|----------------------|------------|
| Clear, pale blue liquid | Acrid, fruity OT = N/D | N/D | (H2O=1): 0.94 | N/DA, mPas @ 20°C | W/W %: 99+ |

| Boiling Point/ Freezing Point | Decomposition Temperature | Octanol/Water Partitioning Coefficient Log Po/w | Vapor Pressure: | Vapor Density | Evaporation Rate | Ignition | Solubility In Water (20°C) |
|----------------------------------|------------------------------|--|----------------------|------------------|----------------------------|----------|-----------------------------------|
| 214°F/101°C N/DA | N/A | N/DA | mm Hg : 29 @ 20°C | (Air =1): 3.5 | (Butyl Acetate= 1): 3.0 | N/DA | Moderate, 1.6gm/100gm @20°C |

| Flash Point (°F/°C) | Flammable Limit (vol%) | Auto-ignition Temperature (vol%) |
|---------------------------|---------------------------|-------------------------------------|
| Tag Closed Cup: 68°F/20°C | LEL: 2.0% UEL: 12.5% | 790°F/421°C |

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Section X - Stability and Reactivity

Stability:

Stable

Hazardous Decomposition Products:

Oxides of carbon when burned.

Conditions to Avoid:

Temperatures above 40°C, oxidizing or reducing agents, peroxides and amines, storage in absence of inhibitor, and inadvertent addition of catalyst. Avoid aging and contamination.

Incompatibility (Materials to Avoid):

Reducing and oxidizing agents and UV light.

Hazardous Polymerization:

May occur

Section XI - Toxicological Information

| Acute Oral Toxicity | Acute Dermal Toxicity | Acute Inhalation Toxicity | Irritation - skin | Irritation - Eye |
|----------------------------|---------------------------------|-------------------------------|-------------------|------------------|
| Oral(Rat) LD50: 7872 mg/kg | Dermal (Rabbit) LD50: 9400mg/kg | Inhalation (Rat) LC50 3750ppm | N/DA | N/DA |

| Sensitization | Mutagenicity | Sub-chronic Toxicity |
|---------------|--------------|----------------------|
| N/DA | N/DA | N/DA |

Section XII - Ecological Information

Ecotoxicological Information

| Acute Toxicity to Fish | Acute Toxicity to Invertebrates | Acute Toxicity to Algae | Bioconcentration | Toxicity to Sewage Bacteria |
|--|---------------------------------|-------------------------|------------------|-----------------------------|
| 96 hour LC50: fathead minnows: 150 ppm bluegill sunfish; 232 ppm | N/DA | N/DA | N/DA | N/DA |

Chemical Fate Information

| | |
|-------------------------------|------|
| Biodegradability | N/DA |
| Chemical Oxygen Demand | N/DA |

Section XIII - Disposable Considerations

Dispose of diking materials and absorbent in compliance with State, Local, and Federal regulations. Residual vapors may explode on ignition; do not cut, drill, or weld on or near the container. Mix with compatible chemical which is less flammable and incinerate.

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section XIV - Transport Information

| | |
|--|---|
| DOT (49 CFR 172) | |
| Proper Shipping Name: | Flammable liquids, n.o.s., (methyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII |
| Identification Number: | UN1993 |
| Marine Pollutant: | No |
| Special Provisions: | T8, T31 |
| Emergency Response Guidebook (ERG) #: | 128 |
| IATA (DGR): | |
| Proper Shipping Name: | Flammable liquids, n.o.s., (methyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII |

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| | |
|---|---|
| Class or Division: | 3 |
| UN or ID Number: | UN1993 |
| Packaging Instructions: | |
| Emergency Response Guidance (ICAO)#: | 3L |
| IMO (IMDG): | |
| Proper Shipping Name: | Flammable liquids, n.o.s., (methyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII |
| Class or Division: | 3.2 |
| UN or ID Number: | UN1993 |
| Special Provisions & Stowage/Segregation: | None |
| Emergency Schedule (EmS)#: | |
| Other Information: | Flash point = 20°C |

Section XV - Regulatory Information

US Federal Regulations

| | |
|---|---|
| Clean Air Act: HAP/ODS | <p>This product contains the following hazardous air pollutants (HAP) as defined by the U.S. Clean Air Act:</p> <ul style="list-style-type: none"> Methyl methacrylate, CAS# 80-62-6 <p>This product contains no Class 1 or Class 2 ODS.</p> |
| Clean Water Act: Priority Pollutant/Hazardous Substance | <p>This product contains the following Hazardous Substances as defined by the CWA:</p> <ul style="list-style-type: none"> Methyl methacrylate, CAS# 80-62-6 <p>This product does not contain any substances that are a Priority Pollutant or Toxic Pollutant under the CWA.</p> |
| FDA: Food Packaging Status | <p>This product has not been cleared by the FDA for use in food packaging and/or other applications as an indirect food additive.</p> |
| Occupational Safety and Health Act | <p>This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard. Its hazards are:</p> <ul style="list-style-type: none"> Immediate (acute) health hazard Fire hazard Reactive hazard |
| RCRA | <p>This product contains chemicals considered to be hazardous waste under RCRA (40 CFR 261):</p> <ul style="list-style-type: none"> Methyl methacrylate CAS# 80-62-6, RCRA Code U162 Characteristic of Ignitability: RCRA Code: D001 |
| SARA Title III: Section 302 (TPQ) | <p>This product contains no chemicals regulated under Sec. 302 as extremely hazardous substances that carry a TPQ.</p> |
| SARA Title III: Section 302 (RQ) | <p>This product contains chemicals regulated under Section 302 as extremely hazardous chemicals for emergency release notification ("CERCLA" List):</p> <ul style="list-style-type: none"> Methyl methacrylate CAS# 80-62-6, RQ(Lbs): 1000 |
| SARA Title III: Section 311-312: | <p>This product is considered hazardous under the OSHA Hazard Communication Standard and is regulated under Section 311-312 (40 CFR 370). Its hazards are:</p> <ul style="list-style-type: none"> Immediate (acute) health Fire hazard Delayed (chronic) health Reactive hazard |

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| SARA Title III: Section 313: | This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: <ul style="list-style-type: none"> Methyl methacrylate, CAS# 80-62-6 |
| TSCA Section 8(b): Inventory: | This product contains chemicals that are on the TSCA list. |

State Regulations

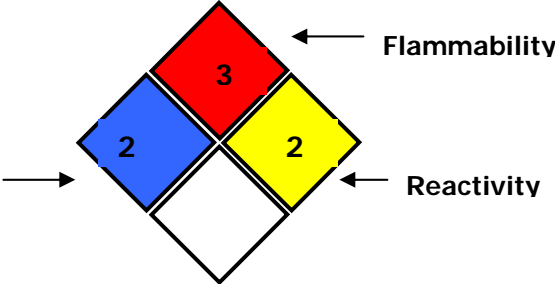
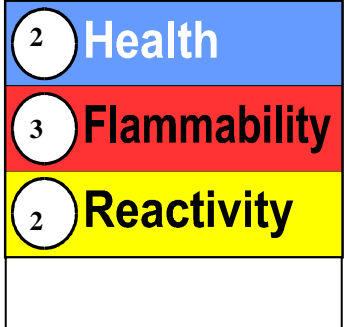
| | |
|-----------------------|--|
| CA Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6 California No Significant Risk Level: None of the chemicals in this product are listed. |
| MA Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6 |
| NJ Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6 |
| PA Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6 |
| FL Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6 |
| MN Right-to-Know Law: | Methyl methacrylate, CAS# 80-62-6 |

International Regulations

| | |
|--|---|
| CDSL: Canadian Inventory (on Canadian Transitional List) | Methyl methacrylate, CAS# 80-62-6 is on the DSL List. WHMIS = B2, D2B. Ethylene glycol dimethacrylate, CAS# 97-90-5 is on the DSL List. WHMIS = n/da N,N-dimethyl-p-toluidine, CAS# 99-97-8 is on the DSL List. WHMIS : none |
| EINECS: European Inventory:   | Versacryl Liquid 'B' Self Cure Monomer: <ul style="list-style-type: none"> HAZARD SYMBOLS: Xi, F; Irritant, Highly Flammable RISK PHRASES: R11: highly flammable, R36/37/38: Irritating to eyes, respiratory system and skin, R43: May cause sensitization by skin contact SAFETY PHRASES: 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, S36/37/39: wear suitable protective clothing, gloves and eye/face protection, S45: In case of accident or if you feel unwell, seek medical advise immediately (show the label where possible) |

Section XVI - Other Information

Hazard Rating System (Pictograms)

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| NFPA: | HMIS: |
|  |  |

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|--------------------------------------|--|
| Revised Sections since Last Version: | Heading, MSDS name changed from Liquid B to Hardening Liquid. Product numbers added. |
| 12/14/11 Review Date | No content changes made |

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