

SAFETY DATA SHEETS

This SDS packet was issued with item:

075534664

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

070580472 070580480



[Versacryl Acrylic Polymer MSDS 1014005,6 09-08-11.pdf](#)
[Versacryl Premix Self Cure Monomer 12-11.pdf](#)
[Versacryl Self Cure Hardening Liquid 12-11.pdf](#)
[Versacryl Sealant.pdf](#)



Versacryl Thermo-Soft Adjustable Reline Self Cure

This unique product has been developed to create thermo-adjustable relines. Imagine having the luxury to simply heat a denture and re-adjust the fit in seconds and if it's not satisfactory the procedure can be repeated anytime by the dentist, the technician or even the patient themselves.

The Versacryl Reline is not a regular "soft reline" material. It is a heat sensitive liner that softens in warm water between 120F - 205F. At body temperature the Versacryl has an extremely comfortable cushiony effect that yields to pressure and actually creates better suction than conventional soft liners.

Versacryl is a cross-linked acrylic denture material guaranteed to create a chemical bond with all other denture acrylics. Versacryl is available in Heat Cure or Self Cure and no special equipment is needed to process.



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.
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Section VII - Handling and Storage

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

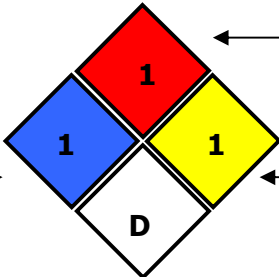
International Regulations

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

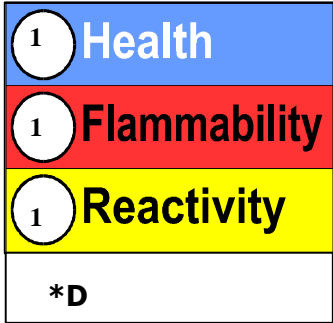
Hazard Rating System (Pictograms)

NFPA:

Health →  **Flammability**

Reactivity ←

HMIS:



* - 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.

The information presented herein was obtained from sources considered to be reliable. However, this information is provided without any warranty, expressed or implied, regarding its correctness or suitability for consumers intended use and/or application. For this and other reasons, we assume no responsibility and expressly disclaim liability for loss, damage or expense arising out of any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared expressly for this product. Use the materials only as directed. If the product is used as a component of another product, the information contained within the MSDS may not be applicable. If one could have any concerns with or problems understanding this MSDS form, please direct all questions to INFOTRAC, Chemical Emergency Resources System at 1(800) 535-5053.

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Material Safety Data Sheet **VERSACRYL PREMIX**

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.
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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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Material Safety Data Sheet **VERSACRYL PREMIX**

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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SELF CURE MONOMER

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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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SELF CURE MONOMER

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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 Diocetyl 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"> Diocetyl 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 Diocetyl 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 Diocetyl 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 Diocetyl phthalate, CAS# 117-81-7

Review Date: 12/14/11 | Replaces Date: 2/5/08

Material Safety Data Sheet **VERSACRYL PREMIX**

SELF CURE MONOMER



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

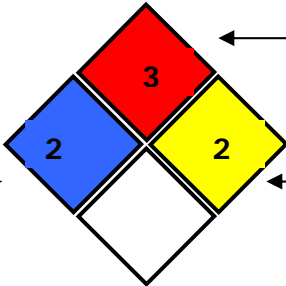
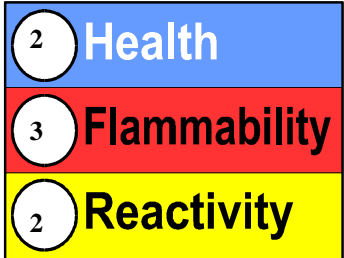
CA Right-to-Know Law:	Methyl methacrylate, CAS# 80-62-6, Dibutyl phthalate, CAS# 84-74-2, Dioctyl phthalate, CAS# 117-81-7 California No Significant Risk Level: Dioctyl phthalate, CAS# 117-81-7 = 80 µg/day California Safe Drinking Water Act: The following statement(s) is(are) made in order to comply 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:
 <p>Health → 2 ← 3 Flammability</p> <p>→ 2 ← Reactivity</p>	 <p>2 Health</p> <p>3 Flammability</p> <p>2 Reactivity</p>

Review Date: 12/14/2014

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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

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	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	>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/DA - No Data Available						
N/R - Not Reviewed	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

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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.
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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.
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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	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

Reviewed Date: 12/14/11 | Replaces Date: 2/5/08

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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
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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

Reviewed Date: 12/14/11 | Replaces Date: 2/5/08

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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	This product contains the following hazardous air pollutants (HAP) as defined by the U.S. Clean Air Act: <ul style="list-style-type: none"> Methyl methacrylate, CAS# 80-62-6 This product contains no Class 1 or Class 2 ODS.
Clean Water Act: Priority Pollutant/Hazardous Substance	This product contains the following Hazardous Substances as defined by the CWA: <ul style="list-style-type: none"> Methyl methacrylate, CAS# 80-62-6 This product does not contain any substances that are a Priority Pollutant or Toxic Pollutant under the CWA.
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 a hazardous chemical under the OSHA Hazard Communication Standard. Its hazards are: <ul style="list-style-type: none"> Immediate (acute) health hazard Fire hazard Reactive hazard
RCRA	This product contains chemicals considered to be hazardous waste under RCRA (40 CFR 261): <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)	This product contains no chemicals regulated under Sec. 302 as extremely hazardous substances that carry a TPQ.
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 methacrylate CAS# 80-62-6, RQ(Lbs): 1000
SARA Title III: Section 311-312:	This product is considered 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 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

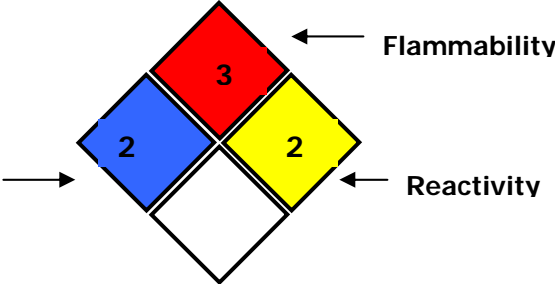
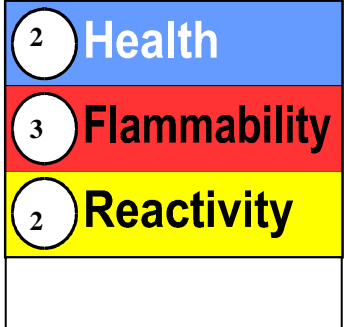
CA Right-to-Know Law:	Methyl methacrylate, CAS# 80-62-6 California No Significant Risk Level: None of the chemicals in this product are listed.
MA Right-to-Know Law:	Methyl methacrylate, CAS# 80-62-6
NJ Right-to-Know Law:	Methyl methacrylate, CAS# 80-62-6
PA Right-to-Know Law:	Methyl methacrylate, CAS#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

NFPA:	HMIS:
	

Material Safety Data Sheet VERSACRYL**SELF CURE HARDENING LIQUID****Page 7 of 7**

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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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

Family: SEALANT

Product Use: DENTURE SEALANT

Product #: Varies

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

Manufacturer: KEYSTONE INDUSTRIES
616 Hollywood Ave. Cherry Hill, NJ 08002
Emergency Phone Numbers: (800) 535 - 5053
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.

Revised Date: Initial | Replaces Date: Initial

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 move 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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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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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

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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.

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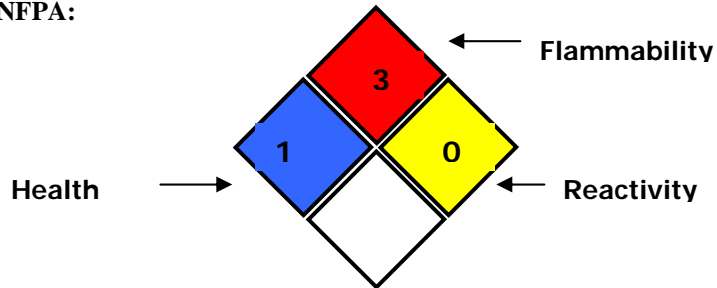
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Section 16 - Other Information

Hazard Rating System (Pictograms)

NFPA:

HMIS:



1	Health
3	Flammability
0	Reactivity

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Section 1. Identification

GHS product identifier : Versacryl Powder

Other means of identification : Not available.

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

Product type : Solid.

Product use : Dental Polymer

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Keystone Industries
52 West King Street
Myerstown, PA 17067
(856) 663-4700

Emergency telephone number (with hours of operation) : (800) 535-5053

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN SENSITIZATION - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 99.7%

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : May cause an allergic skin reaction.

Precautionary statements

Prevention : Wear protective gloves. Avoid breathing dust. Contaminated work clothing must not be allowed out of the workplace.

Response : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

May contain one or more of the following components in quantities considered hazardous:

Ingredient name	CAS number	EC number	%
dibenzoyl peroxide	94-36-0	202-327-6	<1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
redness
irritation
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

- Small spill** : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
dibenzoyl peroxide	ACGIH TLV (United States, 3/2016). TWA: 5 mg/m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. NIOSH REL (United States, 10/2013). TWA: 5 mg/m ³ 10 hours. OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Solid. [Fine powder]
- Color** : White/pink with possibility of fine red fibers
- Odor** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: 304°C (579.2°F) [Tagliabue.]
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility** : Insoluble in the following materials: cold water and hot water.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : 200°C (392°F)
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
dibenzoyl peroxide	LD50 Oral	Rat	6400 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
dibenzoyl peroxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Severe irritant	Human	-	1344 hours 5 Percent Intermittent	-
	Skin - Moderate irritant	Woman	-	1 Percent	-

Classification

Product/ingredient name	OSHA	IARC	NTP
dibenzoyl peroxide	-	3	-

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
redness
irritation
- Ingestion** : No specific data.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
dibenzoyl peroxide	EC50 0.83 mg/l EC50 0.07 mg/l LC50 2 mg/l	Algae Daphnia Fish	72 hours 48 hours 96 hours

Product/ingredient name	Test	Result	Dose	Inoculum
dibenzoyl peroxide	-	60 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
dibenzoyl peroxide	-	-	Inherent

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
dibenzoyl peroxide	3.2	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.











Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	UN3077	UN3077	UN3077	UN3077	UN3077
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide)
Transport hazard class(es)	-	9  	9  	9  	9  	9  
Packing group	-	III	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.
Additional information	-	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). Non-bulk packages of this product are not regulated as dangerous goods when	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. Tunnel code (E)	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. IMDG Code Segregation group	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Section 14. Transport information

		transported by road or rail.			16 - Peroxides	
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Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
dibenzoyl peroxide	<1	Yes.	No.	Yes.	Yes.	No.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

Canada inventory : All components are listed or exempted.

International regulations

Section 15. Regulatory information

International lists	Australia inventory (AICS): All components are listed or exempted. China inventory (IECSC): All components are listed or exempted. Japan inventory (ENCS): All components are listed or exempted. Japan inventory (ISHL): Not determined. Korea inventory: All components are listed or exempted. Malaysia Inventory (EHS Register): Not determined. New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted. Philippines inventory (PICCS): All components are listed or exempted. Taiwan Chemical Substances Inventory (TCSI): All components are listed or exempted. Turkey inventory: Not determined.
Chemical Weapons Convention List Schedule I Chemicals	: Not listed
Chemical Weapons Convention List Schedule II Chemicals	: Not listed
Chemical Weapons Convention List Schedule III Chemicals	: Not listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	1
Physical hazards	1
Personal protection	D

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing	: 9/9/2016
Date of issue/Date of revision	: 9/9/2016

Section 16. Other information

Date of previous issue	: No previous validation
Version	: 1
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	: Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Information contained within this SDS is only to be distributed as required by law.