

MATERIAL SAFETY DATA SHEET

SECTION I – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: LANG DENTAL MFG. CO., INC.
 175 MESSNER DRIVE
 WHEELING, IL 60090
 USA

TELEPHONE: PRODUCT INFORMATION: (800) 222-5264 or (847) 215-6622
 MEDICAL EMERGENCY: (800) 222-5264 7:00am-4:00pm central time
 or INFOTRAC 24HRS CHEMICAL RESPONSE SYSTEM (800) 535-5053 or (352) 323-3500

CHEMICAL NAME: POLY ETHYL METHACRYLATE

PRODUCT: FLEXACRYL POWDER

PRODUCT NUMBERS: 0923, 0934, 0956, 0920, 0930, 0950, 1123, 1134

SECTION II – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT(S):	CAS NUMBER:	% :
Particulates, NOC	NE	< 99
Benzoyl Peroxide	94-36-0	< 2

SECTION III – HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Eyes or skin (no absorption); inhalation of dusts.

EFFECTS OF OVER EXPOSURE: OSHA classifies this material as Particulates, Not Otherwise Classified. Eyes, skin and respiratory tract may be irritated by gross overexposure to Particulates, Not Otherwise Classified, no matter how they are generated. Avoid inhalation of dust. Keep dust out of eyes to prevent possible irritation.

SECTION IV – FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove to fresh air. Get medical help if discomfort persists.

EYES: Flush with water for 15 minutes, including under eyelids. Get medical help if discomfort persists.

SKIN: Wash with soap and water. Get medical help if discomfort persists.

INGESTION: Rinse mouth out with water. Call doctor if amount was large.

SECTION V – FIRE FIGHTING MEASURES

EXTINGUISHER METHOD: Water, carbon dioxide, dry chemical

SPECIAL FIRE FIGHTING PROCEDURES: Avoid extinguishing methods, which may generate dust clouds. Water stream can disperse dust in air, producing a fire hazard and possible explosion hazard if exposed to ignition source.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Polymer dust is combustible. The explosive limits of the polymer particles suspended in air are approximately those of coal dust. Fire fighters should wear self-contained breathing apparatus.

MATERIAL SAFETY DATA SHEET**SECTION VI – ACCIDENTAL RELEASE MEASURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep up to avoid slipping hazard. Keep airborne particulate at a minimum when cleaning up spills.

SECTION VII – HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in cool dry place. Keep container closed to prevent water absorption and contamination.

OTHER PRECAUTIONS: Wash thoroughly after use and before eating or smoking.

SECTION VIII – EXPOSURE CONTROL / PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): Use type for Particulates Not Otherwise Classified, if needed.

VENTILATION: Local exhaust at processing equipment.

PROTECTIVE GLOVES: If hot plastic is handled.

EYE PROTECTION: Safety glasses.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: High temperature processing equipment should be ventilated.

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: NA

SPECIFIC GRAVITY (H₂O=1): 1.25

VAPOR PRESSURE: NA

PERCENT VOLATILE W/W%: NA

VAPOR DENSITY (AIR=1): NA

EVAPORATION RATE: NA

SOLUBILITY IN WATER: Insoluble

APPEARANCE AND ODOR: Fine powder. Faint odor in bulk

FLASH POINT: 304 °C (580 °F)

FLAMMABLE LIMIT, AIR VOL % LOWER: NA
UPPER: NA

AUTOIGNITION TEMPERATURE: NE

SECTION X – STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Heating above 240 °C (464 °F)

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Methacrylate monomer and oxides of carbon when burned.

HAZARDOUS POLYMERIZATION: Will not occur.

MATERIAL SAFETY DATA SHEET**SECTION XI – TOXICOLOGICAL PROPERTIES**

TARGET ORGANS: For Polymer – None listed.

MUTAGENICITY DATA: For Polymer – None listed.

REPRODUCTIVE TOXICITY DATA: For Polymer – None listed.

TOXICITY DATA: For Polymer – None listed.

SECTION XII – ECOLOGICAL INFORMATION

AQUATIC TOXICITY: For Polymer – None listed.

SECTION XIII – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: May be disposed of in landfill or incinerated. Follow federal, state and local regulations for disposal.

SECTION XIV– TRANSPORTATION

SHIPPING NAME: Synthetic Gum Resin Granular, NOIBN

SECTION XV – REGULATORY INFORMATION

TSCA: For use in FDA regulated products only

CANADIAN WHMIS: This product has been classified in accordance with the hazardous criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION XVI - OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) RATING:

HEALTH = 0

FLAMMABILITY = 1

REACTIVITY = 0

The data sheet was prepared in accordance with Directive 93/112/EC

The above information has been gathered from reliable sources and is believed to be correct. However, the information is provided without any warranty, either expressed or implied. Lang Dental Mfg. Co., Inc. shall not be held liable for any damage resulting from the handling of or contact with the above product.

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CHEMICAL NAME: n-BUTYL METHACRYLATE

PRODUCT: FLEXACRYL LIQUID

PRODUCT NUMBERS: 0923, 0934, 0956, 0903, 0904, 0906, 0907, 1123, 1134, 1103, 1104, 1106

SECTION II – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT(S):	CAS NUMBER:	%:
FLEXACRYL-HARD INGREDIENTS:		
N-Butyl Methacrylate	97-88-1	< 94
Trimethylolpropane Trimethacrylate	3290-92-4	< 6
Dimethyl-P-Toluidine	99-97-8	< 2
FLEXACRYL-SOFT INGREDIENTS:		
N-Butyl Methacrylate	97-88-1	< 50
Dibutyl Phthalate	84-74-2	< 50
Trimethylolpropane Trimethacrylate	3290-92-4	< 3
Dimethyl-P-Toluidine	99-97-8	< 1

SECTION III – HAZARDS IDENTIFICATION

Flammable.

Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. High atmospheric concentrations may lead to internal irritation, nausea, vomiting, diarrhea and may lead to drowsiness and unconsciousness. Repeated and or prolonged contact may cause dermatitis

SECTION IV – FIRST AID MEASURES

Inhalation: Remove patient from exposure, keep warm and at rest. Obtain immediate attention.

Skin Contact: Remove contaminated clothing. Wash skin immediately with water. If symptoms (irritation or blistering) occur obtain medical attention.

Eye Contact: Irrigate with eyewash solution or clear water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.

Ingestion: Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain medical attention. Never give anything by mouth to an unconscious person. Call a physician.

Further Medical Treatment

Symptomatic treatment and supportive therapy as indicated.

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SECTION V - FIRE FIGHTING MEASURES

Flammable.

Sealed containers may rupture explosively if hot.

Extinguishing Media: Water spray, foam, dry powder or CO₂. Keep fire exposed containers cool by spraying with water.

Fire Fighting Protective Equipment: A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition. Ensure suitable personal protection (including respiratory protection) during removal of spillages. Prevent entry into drains. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do not adsorb onto sawdust or other combustible materials. Transfer to a container for disposal or recovery.

Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

SECTION VII – HANDLING AND STORAGE

HANDLING: Avoid contact with skin and eyes. Avoid inhalation of high concentrations of vapors. Use only in well ventilated areas. The vapor is heavier than air; beware of pits and confined spaces. Take precautionary measures against static discharges.

STORAGE: Keep in a cool, well-ventilated place. Keep away from sources of ignition – no smoking. Keep away from heat and direct sunlight.

IMPORTANT: Methacrylate stored in bulk must be kept in contact with air (oxygen).

STORATE TEMPERATLURE: Preferably not exceeding 25 °C.

SECTION VIII – EXPOSURE CONTROL / PERSONAL PROTECTION

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Considerations should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

The following information is given as general guidance.

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

Eye : Safety spectacles / Full-face shield.

Gloves: Wear suitable gloves. PVA/Polyethylene laminate and supported PVA gloves offer the best protection. Gloves should be changed regularly and if excessive exposure has occurred.

Other: Wear suitable protective clothing.

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OCCUPATIONAL EXPOSURE LIMITS:

HAZARDOUS INGREDIENT (S)	PEL (OSHA):	TLV (ACGIH):	COMPANY RECOMMENDATION:
n-Butyl methacrylate	N/E	N/E	50 ppm TWA

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

VAPOR DENSITY: 4.9 (Air=1)	WATER SOLUBILITY: 0.1 % at 20 °C	BOILING POINT: 163-164 °C
VAPOR PRESSURE (mm Hg): 2 at 20 °C	SPECIFIC GRAVITY: 0.901 at 15.5 °C	FLASH POINT: 49 °C
APPROX. FLAMMABLE LIMITS: LEL 2.0%, UEL 8.0%	AUTOIGNITION: 269 °C	
Color: Colorless to pale yellow	Odor: Characteristic	FORM: Liquid

SECTION X – STABILITY AND REACTIVITY

Hazardous Reactions: Stable in the presence of inhibitor.
 Susceptible to polymerization initiated by prolonged heating or the presence of catalyst.
 Incompatible materials: Polymerisation catalysts, such as peroxy or azo compounds, strong
 Acids, alkalis and oxidizing agents.
 Vapors are uninhibited and may block flame arresters by polymer formation.

Hazardous Decomposition Product (s): Does not decompose up to auto-ignition temperature.

SECTION XI – TOXICOLOGICAL INFORMATION

Inhalation: Irritating to respiratory system. The vapor has anesthetic properties and when inhaled at concentrations above the occupational exposure limit it may cause headache, fatigue, dizziness, incoordination and loss of consciousness.

Skin Contact: May cause sensitization by skin contact. Irritating to skin. Repeated and/or prolonged contact may cause dermatitis.

Eye Contact: Irritating to eyes. High vapor concentration will cause irritation.

Ingestion: Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

Long term exposure: This material has been in use for many years with no evidence of adverse effects.

There is no evidence of mutagenic potential.

Carcinogenicity Information: None of the components in this material is listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Some evidence of potential for developmental toxicity but inadequate information is available to assess the teratogenic hazard . By analogy with other methacrylates it is unlikely that n-butyl methacrylate represents a teratogenic hazard to man.

None of these effects are likely to occur in humans, provided exposure is maintained at or below the occupational exposure limit.

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SECTION XII – ECOLOGICAL INFORMATION

Environmental Fate and Distribution: High tonnage material produced in wholly contained systems. Liquid with moderate volatility. The product is sparingly soluble in water. The product has moderate potential for bioaccumulation. The product is predicted to have moderate mobility in soil.

Persistence and Degradation: Readily biodegradable. 76%, 28 days. Biological Oxygen Demand (BOD 28 Day/DOC) 32.8%

Toxicity: Harmful to aquatic organisms.

LC50 (fathead minnow) (96 hour) (flow through) 11 mg/l.

EC50 (Daphnia magna) (48 hour) 32 mg/l.

EC50 (senastrum capricornutum) (96 hour) biomass 57 mg/l.

A study in daphnia has shown that repeated doses produce no adverse reproductive effects up to the concentration of 2.6 mg/l.

Effect on Effluent Treatment: The product is substantially removed in biological treatment processes.

SECTION XIII - DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, state or national legislation. Incinerate under approved controlled conditions, using incinerators suitable for the disposal of methacrylates. Decontaminate empty containers before recycling.

SECTION XIV – TRANSPORT INFORMATION

PROPER SHIPPING NAME:	n-Butyl Methacrylate, Inhibited
NA /UN NUMBER:	UN2227
DOT CLASS:	3
PACKING GROUP:	III
IATA CLASS:	3
IMDG CLASS:	3.3
IATA / IMDG LABEL:	Flammable Liquid

Domestic containers of less than 450 L. capacity are not regulated by DOT.

SECTION XV – REGULATORY INFORMATION

EINECS: N-Butyl Methacrylate, 202-615-1

EEC Classification: IRRITANT
Symbol: Indication of Danger



Xi Irritant

Risk Phrases: R10 Flammable
R36/37/38. Irritating to the eyes, respiratory system and skin.
R43 May cause sensitization by skin contact.

Safety Phrases: S9 Keep container in well ventilated place.
S16 Keep away from sources of ignition. No smoking.
S33 Take precautionary measures against static discharges.
S29 Do not empty into drains.

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CANADIAN REGULATIONS:

DSL: Included
WHMIS Classification: B3 Combustible Liquid
D2B Toxic. Skin or eye irritant.

SECTION XVI - OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) RATING:
HEALTH = 2
FLAMMABILITY = 2
REACTIVITY = 2

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