SAFETY DATA SHEET

Issue Date 26-Sept-2014 **Revision Date** **Version** 1

1. IDENTIFICATION

Product Identifier
Product Name FLEXACRYL SOFT LIQUID

Other means of identification
SDS# 038
UN/ID No UN1993
Product Code 1103, 1104, 1106, 1107, 1108, 1109, 1123, 1134, 1156

Recommended use of the chemical and restrictions on use
Recommended Use Fabrication of denture relines

Details of the supplier of the safety data sheet
Supplier Address
Lang Dental Mfg. Co., Inc.
175 Messner Dr.
Wheeling, IL 60090
USA

Emergency telephone number
Company Phone Number 847-215-6622
Emergency Telephone (INFOTRAC) 352-323-3500 (International)
800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity – Inhalation (Dusts/Mists)	Category 4
Skin corrosion / irritation	Category 2
Serious eye damage / eye irritation	Category 2
Skin sensitization	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 3

Signal word
Danger

Hazard statements Harmful if inhaled.
Causes skin irritation.
Causes severe eye irritation.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
May cause respiratory irritation.

May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure.
Flammable liquid and vapor.

Appearance Colorless to slight yellow liquid **Physical state** Liquid **Odor** Acrid

Precautionary Statements – Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Use only outdoors or in a well-ventilated area.
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves and clothing. Wear eye and face protection.
Contaminated clothing should not be allowed out of the workplace.
Do not breathe dust, fume, gas, mist, vapors or spray.
Keep away from heat, spark, open flame and hot surface. NO SMOKING.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep cool.

Precautionary Statements – Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. If skin irritation or rash occurs, get medical advice/attention.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
IN CASE OF FIRE: Use CO_2, dry chemical or foam for extinction.

Precautionary Statements – Storage Store in a well-ventilated place.
Keep container tightly closed.
Store locked up.

Precautionary Statements – Disposal Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) May be harmful if swallowed
May be harmful in contact with skin

Other Information Very toxic to aquatic life with long lasting effects
Very toxic to aquatic life

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight - %	Trade Secret
Citric Plasticizer	Proprietary	<50	*

N-Butyl Methacrylate	97-88-1	<50	*
Trimethylolpropane Trimethacrylate	3290-92-4	<5	*
N, N-Dimethyl-p-Toluidine	99-97-8	<5	*

*Specific chemical weight has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General advice If exposed or concerned, get medical advice or attention.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

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

Ingestion Do NOT induce vomiting. Wash out mouth with water and give 200-300 mL (half pint) of water to drink. Get medical attention. Never give anything by mouth to an unconscious person.

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

Most important symptoms and effects, both acute and delayed

Symptoms May cause skin and eye irritation. Irritating to mouth, throat, and stomach if ingested. May cause irritation to the mucous membranes and upper respiratory tract..

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Suitable: Chemical foam, carbon dioxide (CO_2), dry chemical
Unsuitable: Not determined

Specific hazards arising from the chemical
Flammable. Vapors may travel to source of ignition and flash back. Fine mist or sprays may be flammable at temperatures below the flash point. May polymerize on heating. Sealed containers may rupture explosively if hot. Cool containers exposed to flames with water until well after the fire is out.

Hazardous Combustion Products: Carbon oxides
Sensitivity to Static Discharge: Yes

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Review Section 5 Fire-Fighting Measures and Section 7 Handling and Storage before proceeding with clean up. Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe areas. Ventilate affected area. Wear self-contained breathing apparatus (SCBA).

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and clean-up

Method for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Dike the spilled material, where this is possible.

Method for clean-up Take up with sand or other non-combustible absorbent material and place into containers for later disposal. Clean up material as RCRA Hazardous Waste. Use non-sparking hand tools and explosion-proof electrical equipment.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Do not breath dust, fume, gas, mist, vapors, or spray. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling. Keep containers closed when not in use. Ground container and transfer equipment to eliminate static electric sparks. Keep away from heat, sparks, open flame, and hot surfaces. NO SMOKING. Use non-sparking hand tools and explosion proof electrical equipment. Take precautionary measures against static discharges. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protection recommended in Section 8. Contaminated clothing should not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight. Store in accordance with National Fire Protection Association recommendations. Maintain air space inside storage containers. Inhibitor requires air (oxygen) contact to function. Store locked up.

Incompatible materials Oxidizers and reducing agents
Material has strong solvent properties and can soften paint and rubber.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required. The following information is given as general guidance.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Citric Plasticizer	TWA: 5 mg/m^3	TWA: 5 mg/m^3 TWA: 5 mg/m^3 (vacated)	IDLH: 4000 mg/m^3 TWA: 5 mg/m^3

Appropriate engineering controls

Engineering controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

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

Skin and body protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls as appropriate to prevent skin contact. Nitrile rubber is better than PVC.
Respiratory protection	None needed under normal use conditions. If the TLV is exceeded, use NIOSH approved organic vapor respirator with a dust/mite pre-filter. Use positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure is not known, or any other circumstances where air purifying respirators may not provide adequate protections.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	**Odor**	Acrid
Appearance	Colorless to slightly yellow liquid	**Odor threshold**	Not determined
Color	Clear to slightly yellow		

Property	**Values**	**Remarks / Method**
pH	Not determined	
Melting point / freezing point	-25°C / -13°F	
Boiling point / boiling range	163-164°C / 325-327°F	
Flash point	59°C / 139°F	
Evaporation rate	Not determined	
Flammability (solid, gas)	n/a (liquid)	
Flammability limits in air		
Upper flammability limit	Not established	
Lower flammability limit	Not established	
Vapor pressure	2 mm Hg	@ 20°C
Vapor density	4.9	@15.5°C (Air = 1)
Specific gravity	0.978	
Water solubility	36 wt%	
Solubility in other solvents	Not determined	
Partition coefficient	3.03	
Autoignition temperature	Not established	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic viscosity	Not determined	
Explosive properties	Not determined	
Oxidizing properties	Not determined	

Other information

10. STABILITY AND REACTIVITY

Reactivity Not reactive under normal conditions

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing

Hazardous polymerization Hazardous polymerization may occur. Monomer vapors are uninhibited and may form polymers in vent or flame arresters, resulting in blockage of vents. Conditions to avoid for hazard polymerization: excessive heat, storage in absence of inhibitor, inadvertent addition of catalyst

Conditions to avoid

Avoid all possible sources of ignition, contamination.

Incompatible materials

Oxidizers. Reducing agent.

Material has strong solvent properties and can soften paint and rubber.

Hazardous decomposition products If heated to decomposition, CO and CO_2 may be produced.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposures

Product information

Inhalation Harmful if inhaled.

Eye contact Causes severe eye irritation.

Skin contact Causes skin irritation. May be harmful in contact with skin.

Ingestion May be harmful if swallowed.

Component information

Chemical Name	ORAL LD50	DERMAL LD50	INHALATION LC50
Citric plasticizer	6300 mg/kg (rat)	>2000 mg/kg (rabbit)	>15.68 mg/L (rat) 4 h
N-Butyl Methacrylate 97-88-1	16 µg/kg (rat)	10181 mg/kg (rabbit)	4910 ppm (rat) 4 h
Trimethylolpropane Trimethacrylate 3290-92-4	=5660 /kg (rat)	= 16 mL/kg (rabbit)	-
N, N-Dimethyl-p-Toluidine 99-97-8	1650 mg/kg (rat)	-	1400 mg/m^3 (rat) 4 h

Information on physical, chemical and toxicological effects

Symptoms May cause skin and eye irritation. May cause irritation to the mucous membranes and upper respiratory tract. Irritating to mouth, throat, and stomach if ingested.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause allergic skin reaction.

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity May damage fertility or the unborn child.

STOT – single exposure May cause respiratory irritation. May cause drowsiness or dizziness

STOT – repeated exposure May cause damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity – Product Not determined

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral)	4697	mg/kg
ATEmix (dermal)	2098	mg/kg
ATEmix (inhalation-dust/mist)	4998	mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long-lasting effects

Chemical Name	Algae / aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Citric Plasticizer	0.4: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 1.2: 72 h Pseudokirchneriella subcapitata mg/L EC50	0.31 – 5.45: 96 h Pimephales promelas mg/L LC50 static 0.42 – 1.28: 96 h Lepomis macrochirus mg/L LC50 static 0.71 – 1.2: 96 h Pimephales promelas mg/L LC50 flow-through 1.24 – 5.3: 96 h Oncorhynchus mykiss mg/L LC50 static 1.38 – 1.74: 96 h Lepomis macrochirus mg/L LC50 flow-through > 1.24: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	EC50 = 10.9 mg/L 30 min EC50 = 10.9 mg/L 5 min EC50 =11.1 mg/L 15 min EC50 = 2.2 mg/L 24 h	2.99 48 h Daphnia magna mg/L EC50 Static 3.4: 48 h Daphnia magna mg/L EC50
N-Butyl Methacrylate 97-88-1	57: 96 h Pseudokirchneriella subcapitata mg/L EC50	11:96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 37 mg/L 5 min EC50 = 49 mg/L 15 min EC50 = 55 mg/L 5 min EC50 > 253.6 mg/L 18 h	32:48 h Daphnia magna mg/L EC50
Trimethylolpropane Trimethacrylate 3290-92-4	-	144: 96 h Oncorhynchus mykiss LC50 160: 96 h Pimephales promelas mg/L LC50 112: 96 h Lepomis macrochirus mg/L LC50	-	-
N,N-Dimethyl-p-Toluidine 99-97-8	-	42-50.5: 96 h Pimephales promelas mg/L LC50 flow-through	-	-

Persistence and degradability Material is readily biodegradable. 88% in 28 days

Bioaccumulation This product has moderate potential for bioaccumulation.

Mobility This product is predicted to have moderate mobility in soil.

Chemical Name	Partition coefficient
Citric Plasticizer	5.38
N-Butyl Methacrylate	2.26

Other adverse effects This product is substantially removed in biological treatment process BOD 28 day / DOC = 32.8%.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Dispose of in accordance with federal, state and local regulations. Do not flush to surface or sanitary sewer system Dispose of by incineration or in accordance with local regulations. Do not incinerate closed containers.

Contaminated Packaging Dispose of all empty containers in accordance with federal, state and local regulations..

Chemical Name	RCRA	RCRA – Basis for Listing	RCRA – D Series Wastes	RCRA – U Series Wastes
Citric Plasticizer	U069	Included in waste stream; F039	-	U069

14. TRANSPORTATION INFORMATION

DOT

UN / ID No	UN1993
Proper shipping name	Flammable liquid, n.o.s. (n-Butyl Methacrylate, stabilized / Plasticizer solution)
Hazard Class	3
Packing Group	III

IATA

UN / ID No	UN1993
Proper shipping name	Flammable liquid, n.o.s. (n-Butyl Methacrylate, stabilized / Plasticizer solution)
Hazard Class	3
Packing Group	III

IMDG

UN / ID No	UN1993
Proper shipping name	Flammable liquid, n.o.s. (n-Butyl Methacrylate, stabilized / Plasticizer solution)
Hazard Class	3
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

DSL	Listed	Canadian Domestic Substances List
EINECS	Listed	European Inventory of Existing Chemical Substances

US Federal Regulations

Chemical Name	CAS	Weight %	SARA 313 Threshold Values %
Citric Plasticizer	Proprietary	<50	1.0

SARA 311 / 312 Hazard Categories

Chemical Name	CWA – Reportable Quantities	CWA – Toxic Pollutants	CWA – Priority Pollutants	CWA – Hazardous Substances
Citric Plasticizer	10 lb.	X	X	X

Chemical Name	Hazardous Substances RQs	CERCLA / SARA RQ	Reportable Quantity (RQ) Final
Citric Plasticizer	10 lb.	-	10 lb. / 4.54 kg

US State Regulations

Chemical Name	California Proposition 65
Citric Plasticizer	Developmental Female Reproductive Male Reproductive

US State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Citric Plasticizer	X	X	X
N-Butyl Methacrylate	X	X	X

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability
	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**
	2	2	2

Issue Date 26-Sept-2014
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Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet