

*This Safety Data sheet is not intended for consumers and does not address consumer use of the product.
For information regarding consumer applications of this product, refer to the product labeling.*

1. Identification

Product Name: Mastisol® Liquid Adhesive

Product Use: liquid adhesive

Marketed by: Eloquest Healthcare, Inc.
780 West Eight Mile Road
Ferndale, Michigan 48220

Manufactured by: Ferndale Laboratories, Inc.
780 West Eight Mile Road
Ferndale, Michigan 48220

Emergency Telephone: For emergency involving spill, leak, fire exposure or accident, call
CHEMTREC (800) 424-9300, day or night

Product Technical and Medical Information: (800) 621-6003

2. Hazards Identification

GHS Hazard Classification

Flammable Liquid: Category 2

Skin irritation : Category 2

Skin sensitization: Category 1

Eye irritaiton: Category 2B

Specific target organ toxicity – single exposure: Category 3

Acute toxicity – oral: Category 4



Signal Word: Danger

Hazard Statement(s)

- H225 Highly flammable liquid and vapor
- H303+H333 May be harmful if swallowed or inhaled
- H317 May cause an allergic skin reaction
- H302 Harmful if swallowed

Precautionary Statement(s)

- P210 Keep away from heat/sparks/open flames/hot surfaces. –No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink, or smoke when using this product.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P301+P312 If swallowed: Call a POISON Control Center/doctor if you feel unwell.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 If on skin: wash with plenty of water
- P330 Rinse mouth
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P370+P378 In case of fire: Use CO₂ or dry chemical for small fire, water spray or foam for large fire.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Potential Health Effects

Inhalation:	May cause upper respiratory tract irritation. High vapor concentration may cause burning sensation in nose and throat.
Eye Contact:	May cause irritation including stinging, tearing, and redness.
Skin Contact:	Repeated or prolonged contact may cause irritation, defatting and drying of skin.
Skin Absorption:	Prolonged or widespread contact may result in the absorption of potentially harmful amounts.
Ingestion:	May cause dizziness, faintness, drowsiness, decreased awareness or responsiveness, nausea, vomiting, staggering gait, lack of coordination, abdominal cramps, diarrhea, coma and death.
Medical Conditions Aggravated by Overexposure:	Repeated exposure to ethanol may aggravate liver injury produced from other causes. Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis. Skin contact may aggravate dermatitis.

**National Fire Protection Association (NFPA)**

(estimated)

Health-2 Flammability-3 Reactivity-0

3. Composition/Information on Ingredients

Chemical Name	CAS Number	% by weight	Exposure Limits in Air
Specially Denatured Alcohol 23A, 190 proof (Ethyl Alcohol, Acetone, Water)	64-17-5 (Ethyl Alcohol), 67-64-1 (Acetone), 7732-18-5 (Water)	<60%	1000 ppm TWA, OSHA/ACGIH; 1000 ppm STEL
Gum Mastic	61789-92-2	<45%	None Established
Storax (Styrax Gum)	8046-19-3	<5%	None Established
Methyl Salicylate	119-36-8	<5%	None Established

Listed Carcinogens: The following components, present at concentrations of $\geq 0.1\%$ are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), OSHA or ACGIH: None.

4. First-Aid Measures

Inhalation: Remove person to fresh air; give artificial respiration if not breathing. Obtain medical assistance if respiratory irritation or distress continues.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if pain, redness, or irritation persists. Continue to rinse.

Skin: Wash skin with soap and water for at least 15 minutes. Get medical attention if symptoms persist or occur after washing. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.

Ingestion: Do not induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth. Seek medical attention. Never give anything by mouth to an unconscious person.

5. Fire-Fighting Measures

Extinguishing Media: Small fire: CO₂ or dry chemical
Large fire: Water spray or foam

Special Fire Fighting Procedures: Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.

Unusual Fire and Explosion Hazards:

- Vapors may travel to source of ignition and flash back.
- Vapors may settle in low or confined spaces.
- May produce a floating fire hazard.
- Carbon oxides expected to be the primary hazardous combustion product.

6. Accidental Release Measures

- Personal Protection:** Avoid contact with spilled material. See Section 4 for First Aid advice. Use personal protection recommended in Section 8 of the SDS.
- Spill Cleanup Methods:** Prevent entry into sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Cover with inert, absorbent material and remove to disposal container. Flush with plenty of water.

7. Handling and Storage

- Handling:** Store at controlled room temperature between 59-86°F (15-30°C)

8. Exposure Controls/Personal Protection

- Engineering Controls:** Adequate ventilation so that exposure limits are not exceeded for employees exposed to vapors.
- Respiratory Protection:** Not applicable; aerosol formation is extremely unlikely for normal use. When handling large quantities an approved self-contained breathing respirator may be used if engineering controls do not maintain airborne contaminant concentrations at a level to adequately protect a workers health.
- Eye Protection:** None required during normal administration or use of Mastisol® Liquid Adhesive. When handling large quantities or if eye irritation occurs during use, use approved eye protection to safeguard against potential eye contact/irritation.
- Protective Clothing:** Prolonged skin contact may require protective gloves.
- Hygienic Work Practices:** Wash hands thoroughly after handling. If working with large quantities of Mastisol® Liquid Adhesive (such as spill clean-up), use chemical resistant gloves and appropriate eye protection. No eating, drinking or smoking in area.

9. Physical and Chemical Properties

- Appearance:** Yellow colored liquid
- Odor:** Strong aromatic or balsamic odor
- Odor threshold:** Not available
- pH:** Not Available
- Melting point/freezing point:** Not Available
- Initial boiling point and boiling range:** Not Available
- Flash point:** 53°F / 12°C
- Evaporation rate:** Not Available
- Upper/lower flammability or explosive limits:** 19%(V)/3.3%(V) (for 100% ethyl alcohol)

Vapor pressure:	Not Available
Vapor density:	Not Available
Relative density:	Not Available
Solubility (ies):	Not Available
Partition coefficient: (-octanol/water)	Not Available
Auto-ignition temperature:	Not Available
Decomposition temperature:	Not Available
Viscosity:	Not Available

10. Stability and Reactivity

Stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Conditions to avoid:	Avoid high temperatures and all sources of ignition.
Materials to avoid:	Avoid contact with strong oxidizing agents and strong inorganic acids.
Hazardous Decomposition Products:	Combustion can yield carbon dioxide, carbon monoxide, and other oxides of carbon.
Hazardous Polymerization:	Will not occur.

11. Toxicological Information

The topical safety of Mastisol® Liquid Adhesive has been demonstrated in the following studies. The product is considered non-cytotoxic and meets the requirements of the Agar Diffusion Test, ISO 10993-5 guidelines. A primary dermal irritation test in the rabbit showed the product to be a negligible irritant. The product showed weak allergenic potential, Grade I sensitization rate which is not considered significant in the guinea pig maximization test.

Toxicological information included for the ingredients of Mastisol® pertaining to it's intended use as a topical dermal adhesive product:

Ethanol- not toxic by OSHA standards.

Acute Toxicity: LC50 Inhalation (Rat) 20000ppm 10 hrs; LC50 Oral (Rat)-7060 mg/Kg BWT; LDlo Oral (Human)-1400 mg/KG BWT.

Irritation: Eyes- exposure to Ethanol generally causes transient pain, irritation, and reflex lid closure. A foreign-body sensation may persist for one to two days. Vapors product transient stinging and tearing, but no apparent adverse effects. Transiently impaired perception of color may occur with acute ingestion or chronic alcoholism. Skin- Standard Draize skin test (rabbit)-Dose: 20mg/24hrs Reaction: Moderate Repeated exposure may cause skin dryness or cracking.

Specific target organ toxicity –single exposure (GHS): Inhalation- may cause respiratory irritation- Lungs.

Carcinogenicity: Not classifiable as a human carcinogen for IARC, ACGIH, NTP, and OSHA.

Repeated exposure to ethanol may aggravate liver injury produced from other causes. Skin contact may aggravate dermatitis.

Acetone- no data available to show respiratory or skin sensitization, germ cell mutagenicity, teratogenicity, reproductive toxicity, specific target organ toxicity for repeated exposure or aspiration hazard.

Acute Toxicity: LC50 Inhalation (Rat)- 50,100 mg/m³ 8 hours; LD50 Oral (Rat)- 5800 mg/kg; LD50 Skin (Guinea Pig)- 7426 mg/kg.

Irritation: Eyes- Causes eye irritation. Skin- Slightly irritating to skin.

Specific target organ toxicity single exposure (GHS)- May cause drowsiness or dizziness.

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable/potential carcinogen by IARC, ACGIH, NTP, and OSHA.

Gum Mastic has not been thoroughly investigated for chemical, physical and toxicological properties.

Storax has not been thoroughly investigated for chemical, physical, and toxicological properties. It is not classified for acute toxicity.

Methyl Salicylate may cause skin irritation as an undiluted product. Acute dermal toxicity: LD50 (Rabbit)- >5000mg/kg. Not classified as harmful by contact with skin.

12. Ecological Information

There is no ecological information available at this time. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways.

13. Disposal Considerations

Vapors may collect in empty containers. Treat empty containers as hazardous. Dispose of spill-clean up and other wastes in accordance with local, state, and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dispose of via sinks, drains, or into immediate environment.

14. Transport Information

Transportation Incident Information: For further information related to spills resulting from transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents.

U.S. DOT Hazardous Material Shipping Description:

Proper Shipping Name: Adhesives

Hazard Class: 3

UN/ID: UN1133

Packaging Group II

Finished Product: Shipped as ID8000, Consumer Commodity, 9

15. Regulatory Information

TSCA: Exempt

CERCLA: Components present in this product at a level which could require reporting under this statute are:

Acetone

CAS No: 67-64-1

RQ: 5,000 lbs

SARA Title III (311/312):	Based upon available information, a component of this material is classified as the following health and/or physical hazards according to Section 311 & 312, Acute Health Hazard, Chronic Health Hazard, Fire Hazard
SARA Title III (313):	This material does not contain any chemical components with CAS numbers that exceed the De Minimis reporting levels established by SARA Title III Section 313 and 40 CFR 372.
California Proposition 65:	This product contains trace levels of acetaldehyde known to the State of California to cause cancer.

16. Other Information

Date Issued:	January 30, 2018
Supersedes Date:	February 2, 2015
SDS:	0523, Mastisol® Liquid Adhesive
Reference SDS:	SDA 23A, 190 Proof, P-A Revision 3.0, 10.31.13; StyraX Gum, Datech, Revision Date 30/04/2015; Methyl Salicylate, Novacyl, Version 010 06/03/16; Gum mastic, S-A, Version 3.5, 06/25/2014
Revision Changes:	Updated Section 2. Hazards Identification and Section 9 Physical and Chemical Properties as per Hazard Communication Standard (29 CFR 1910.1200), Updated Section 4. First Aid Measures, and Section 11 Toxicological Information.

Notice: The preceding information is based on available data compiled by the manufacturer from its own studies and the work of others and is believed to be correct. However, no warranty is expressed or implied as to the accuracy, completeness or adequacy of this information, the results to be obtained from the use thereof or the hazards connected with the use of the material. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar, Ferndale Laboratories, Inc. does not assume any responsibility for the results of its use. The information is furnished upon the condition that the persons receiving it shall make their own determination as to the suitability of the product for their particular use.