

This Material 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. PRODUCT & COMPANY IDENTIFICATION

Product Name: Mastisol® Liquid Adhesive

Marketed by: Eloquest Healthcare, Inc. **Manufactured by:** Ferndale Laboratories, Inc.
780 West Eight Mile Road 780 West Eight Mile Road
Ferndale, Michigan 48220 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. COMPOSITION/HAZARDOUS INGREDIENTS (OSHA-regulated, present at ≥ 1%)

| Chemical Name | CAS Number | Percent (by weight) | Exposure Limits in Air |
|--------------------------------------------|------------|---------------------|-----------------------------------------|
| Specially Denatured Alcohol 23A, 190 proof | 64-17-5 | <60% | 1000 ppm TWA, OSHA/ACGIH; 1000 ppm STEL |
| Gum Mastic | 61789-92-2 | <45% | None Established |
| Storax (Styrax) | 8046-19-3 | <5% | None Established |
| Methyl Salicylate | 1199-36-8 | <5% | None Established |

Listed Carcinogens: The following components, present at concentrations of ≥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.

3. HAZARDS IDENTIFICATION

| | <u>Health</u> | <u>Flammability</u> | <u>Reactivity</u> |
|-------------------------------------------------------------------|---------------|---------------------|-------------------|
| National Fire Protection Association (NFPA) (estimated) | 2 | 3 | 0 |

This product is HAZARDOUS by OSHA Hazard Communication definition. Flammable. May be harmful if swallowed.

Emergency Overview

Appearance: Yellow colored liquid
Odor: Strong aromatic or balsamic odor

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. |

4. FIRST AID MEASURES

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|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation: | Remove 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. Get medical attention immediately. 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: | If patient is fully conscious, give 2-3 glasses of water. Do not induce vomiting unless directed by medical personnel. Obtain medical attention. |
| Note to Physician: | For ingestion, any unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs or the excessive administration of fluids. |

5. FIRE FIGHTING

| | |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flammable Properties: | Flash Point: > 44°F / > 7°C Flammable Limits (volume % in air): LEL: 3.3 UEL: 19.0 Autoignition Temperature: Not available |
| Extinguishing Media: | Small fire: CO ₂ 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: <ul style="list-style-type: none">• Vapors may travel to source of ignition and flash back.• Vapors may settle in low or confined spaces.• May produce a floating fire hazard. |

- Emits toxic fumes under fire conditions.

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 MSDS.
- 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
- Nonvolatile Residue:** NLT 300 mg/g

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.

Gum Mastic and Storax have not been thoroughly investigated for chemical, physical and toxicological properties. Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects which together constitute fetal alcohol syndrome. Repeated exposure to ethanol may aggravate liver injury produced from other causes. Skin contact may aggravate dermatitis.

In toxicology studies Methyl Salicylate has shown eye irritation and skin irritation in guinea pigs. Repeated large doses (both oral and dermal) have produced reproductive effects in rats.

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 RECOMMENDATIONS

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 under Consumer Commodity

15. REGULATORY INFORMATION

TSCA: Exempt

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

| <u>Chemical</u> | <u>CAS Number</u> | <u>Upper Bound Conc.%</u> |
|-----------------|-------------------|---------------------------|
| Acetone | 67-64-1 | 7.24 |
| Methanol | 67-56-1 | 0.0015 |
| Acetaldehyde | 75-07-0 | 0.0010 |

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 and Chronic Health 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 12, 2012

Supersedes Date: March 4, 2010

MSDS: 0523, Mastisol[®] Liquid Adhesive

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.