SAFETY DATA SHEET

1. **Identification of Substance and Manufacturer:**
#112 AMMONIATED ULTRASONIC INSTRUMENT CLEANING SOLUTION PCN: 188,190
Use: Ultrasonic cleaning solution. To be used only for cleaning applications as specified.
Manufacturer: L&R Manufacturing Company, 577 Elm Street, P.O. Box 607 Kearny, NJ 07032-0607 USA.
Publication Date: 05/04/2018 REV: M
Product information call 201-991-5330 www.lrultrasonics.com
For emergencies involving a spill, leak fire or accident contact CHEMTEL 800-255-3924 within the United States. Or 1-813-248-0585 for International calls.

2. **HAZARDS IDENTIFICATION**

WARNINGS! FLAMMABLE LIQUID AND VAPOR.MAY BE HARMFUL IF SWALLOWED. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. PROLONG OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.
Acute Eyes: Direct contact causes irritation, redness and possible tearing.
Acute Skin: Prolonged or repeated contact causes redness, and drying of the skin..
Acute Inhalation: Breathing high concentrations of vapors or mists may cause irritation to the nose and may cause drowsiness.
B: POTENTIAL HEALTH EFFECTS:
Acute Ingestion: Not known, but expected to cause nausea and diarrhea.
Chronic Effects: This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogen.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Percentage
Mineral Spirits Regular (C_6H_6 < 0.1%), (Stoddard solvent) (Mixture of aliphatic and alicylic C7-C12 hydrocarbons with maximum content of 25% C7-C12 aromatic hydrocarbons)	8052-41-3	60-65
Solvent Naphtha Light Aliphatic (mixture consisting mainly of straight-chained and cyclic aliphatic having 5 to 9 carbons atoms per molecules.)	64742-89-8	15-20
Oleic Acid	112-80-1	5-10
Isopropanolamine	78-96-6	1 – 5
2 Propoxyethanol	2807-30-9	1 - 5
Ammonium Hydroxide	1336-21-6	1 – 5

The exact concentration of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Eye Exposure: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention.
Skin Exposure: Wash thoroughly with water. If irritation or redness develops, seek medical attention**.**
Inhalation: If respiratory irritation or distress occurs, move victim to fresh air. Seek medical attention if respiratory irritation or distress continues**.**
Ingestion: Seek immediate medical attention. DO NOT INDUCE VOMITING.
MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: Skin contact may aggravate existing skin disease.

5. FIRE FIGHTING MEASURES

FIRE HAZARD DATA:
Suitable Extinguishing Media: Extinguish with dry chemical, CO2 or a BC/ABC extinguisher.
Unsuitable Extinguishing Media: Do not use a solid stream of water, since the stream will scatter and spread the fire. Water spray may be used to keep fire exposed containers cool.
Special Fire Fighting Procedures: Wear full protective clothing and self-contained breathing apparatus (SCBA) approved for fire fighting.
Unusual Fire and Explosion Hazards: Closed containers may explode due to build up of pressure when exposed to extreme heat.
Hazardous Decomposition Materials: (under fire conditions) Oxides of nitrogen and carbon.

6. ACCIDENTAL RELEASE MEASURES

Cleanup and Disposal of Spill: Ventilate area of spill. Use non-reactive material to pick up spill. Dispose of in accordance with local, state and federal regulations.
Environmental and Regulatory Reporting: Not required

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures: 39 to 100 ^{o} F.
HANDLING: AVOID CONTACT WITH SKIN, EYES OR CLOTHING

8. EXPOSURE CONTROL/PERSONAL PROTECTION

General: These recommendations provide general guidance for handling of this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. When developing safe handling procedures, do not overlook the need to clean and dispose of the material. Waste resulting from the use of this product should be handled in accordance with Section 13: Disposal Considerations.

Exposure Guidelines: Exposure limits are recommended worker breathing limits. The following limits apply to this material:

INGREDIENTS	LIMITS	I NGREDIENTS	LIMITS
Mineral Spirits	100 ppm OSHA/ TWA	2 Propoxyethanol	2 mg /m3 ACGIH TWA
Solvent Naphtha	300 ppm OSHA/ ACGIH TWA	Ammonium Hydroxide	50 ppm (as ammonia)
Oleic Acid	None established	Isopropanolamine	PEL Proposed 7.3 mg/m3

Engineering Controls: Provide adequate room ventilation.
Respiratory Controls: For reasonable uses of this material, respiratory protection should not be necessary.
Eye/Face Protection: Safety glasses to protect from splashing**.**
Skin Protection: Wear Rubber or plastic gloves to avoid drying and irritation to the skin.
Work Practice Control: Normal hygiene in the work area should be taken when working with or handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear Liquid **Color:** Pale Yellow to Amber **Odor:** Ammonia.
pH: 10.5 **Specific Gravity:** 0.79 **Odor Threshold:** 5 ppm (ammonia)
Water Solubility: Forms an emulsion **Melting Point Range:** Not applicable **Evaporation Rate:** 1 Ethyl Ether
Freezing Point Range: Not Established **Boiling Point:** > 212 ° F **Partition Coefficient; n-octanol / water:** Not available
Vapor Pressure: 226.666 hPa @ 100 ° F/37.8 ° C Calculated **Relative Vapor Density:** (>) 1 Air=1
Vapor Density: Not established **Decomposition Temperature:** Not available **Flash Point:** 78°F (25.5°C) **Method:** Tag Closed Cup
Auto Ignition Temperature: Not available **Flammability limits (vol/vol %): Lower**: 1% **Upper**: 8%
Percent volatile by volume: Approx. 70 % by volume **V.O.C. (calculated):** 5.67 lbs/gal or 679.7 g/l

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to be avoided: Keep away from heat and open flames
Materials/Chemicals to be avoided: Strong Acids, strong Oxidizing Agents
Hazardous Decomposition Products: Thermal Oxides of carbon and nitrogen
Possibility of Hazardous Reactions: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation: Irritating to eyes.
Acute Skin Irritation: No test data found for product.
Acute Dermal Toxicity: No test data found for product.
Acute Respiratory Irritation: No test data found for product.
Acute Inhalation Toxicity: No test data found for product**.**
Acute Oral Toxicity LD50 (rat): **Mineral Spirits .> 5 gm/kg** **2-Propoxyethanol = 3089 mg/kg**
Solvent Naphtha > 8,000 mg / kg **Ammonia = 350mg/kg** **Oleic Acid > 5 gm/kg**
Isopropanolamine = 2098 mg/kg
Chronic Toxicity: This product does not contain any substances that are considered by OSHA, NTP, IARC OR ACGIH to be a probable or suspected human carcinogen. No additional test data was found for this product.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No data found.

13. DISPOSAL CONSIDERATIONS

This material is a flammable liquid and must be disposed in accordance with all local, state and federal regulations.
IT CAN NOT BE DISPOSED OF IN A SANITARY SEWER SYSTEM.

14. TRANSPORTATION INFORMATION

This product is classified as a flammable liquid for domestic shipments per 49 CFR. For approved domestic shippers ground shipments of containers of 1 gallon or less, this material is listed as ORM-D. For all other containers, shippers: FLAMMABLE LIQUID n.o.s. (Contains Naphtha, Petroleum), 3, UN 1993, Packing group III. Do not stack cartons more than five high.

15. REGULATORY INFORMATION

Inventory Issues: All components of this product are listed on the U.S. TSCA, Canadian DSL**,** European EINECS/ELINS chemical listings

16. OTHER INFORMATION

National Fire Protection Association

Hazard Rating, NFPA	Health	Flammability	Reactivity	Special
	2	3	0	--

SDS CHANGES

REV	DATE	DESCRIPTION OF CHANGE
M	**05/04/2018**	**Change in Emergency Contact**

Disclaimer: The information herein is given in good faith but no warranty expressed or implied is made. This SDS has been prepared by L&R Manufacturing Company.