



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

**INGREDIENTS**

Isopropyl Alcohol  
Pine oil  
Water

**LIMITS**

400 PPM OSHA/ AACGIH TWA  
100 PPM ACGIH TWA  
None established

**INGREDIENTS**

Oleic Acid  
Ammonium hydroxide 25 o Be.

**LIMITS**

None Established  
50 PPM ( as ammonia ) OSHA/PEL

**Engineering Controls:** Normal 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:** 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:** Hazy Liquid

**pH:** Approximately 11.5 (as concentrate)

**Water Solubility:** Soluble

**Freezing Point Range:** Not established

**Vapor Pressure:** Not established

**Flash Point:** 93 °F ( 33.9° C)

**Flammability limits (vol/vol %):** Lower: No Data Upper: No Data

**Percent volatile by volume:** Approximately 85% as water and alcohol

**Color:** Pink

**Specific Gravity:** 0.915

**Melting Point Range:** Not available

**Boiling Point:** 210- 212 ° F

**Vapor Density:** Not established

**Method:** Tag Closed Cup

**V.O.C. (calculated):** 2.08 lbs./ gal or 249.3 gms / l.

**Odor:** Strong Ammonia Odor

**Odor Threshold:** Not available

**Evaporation Rate:** Not Applicable

**Partition Coefficient; n-octanol / water:** Not available

**Decomposition Temperature:** Not available

**Auto Ignition Temperature:** Not available

**10. STABILITY AND REACTIVITY**

**Chemical Stability:** Stable

**Conditions to be avoided:** Heat and open flame

**Materials/Chemicals to be avoided:** Strong acids, strong oxidizing agents, aluminum.

**Decomposition Type: 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) =** 74 gm/kg .for oleic acid

3200 mg/kg for Pine Oil

350 mg/kg for ammonium hydroxide

5045 mg/kg for isopropyl alcohol

**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 product is biodegradable and can be, with dilution, disposed in sanitary sewer system where permitted by local, federal and state regulations.

**14. TRANSPORTATION INFORMATION**

For domestic ground transport this is classified as ORM-D. For air or export, it is classified as Flammable liquid n.o.s. (Contains Isopropyl Alcohol), 3, Un1993, PG 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

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**MSDS CHANGES**

REV

F

G

DATE

8/9/07

2/25/09

DESCRIPTION OF CHANGE

Reviewed/ changed to ANSI Z400.1-2004 format

Reviewed / deleted PCN#

**Disclaimer:** The information herein is given in good faith but no warranty expressed or implied is made.

Prepared By: L&R Manufacturing Company

Date: 02/25/09

Product Name: **GENERAL PURPOSE CLEANER CONCENTRATE AMMONIATED**