

MATERIAL SAFETY DATA SHEET

CITRUS CLEARING SOLVENT

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1. SUBSTANCE IDENTIFICATION

SUBSTANCE: **d LIMONEN**

TRADE NAMES/SYNONYMS: Orange Terpenes

2. COMPOSITION AND INGREDIENTS INFORMATION

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|------------|-----------------|
| D'Limonene | CAS #68647-72-3 |
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3. HAZARDS IDENTIFICATION

| | | | |
|---------------------------|----------|--------|--------------|
| NFPA RATINGS (SCALE 0-4): | Health=1 | Fire=2 | Reactivity=0 |
|---------------------------|----------|--------|--------------|

Americlear is a clear to colorless liquid with an odor reminiscent of citrus.

Potential Health Effects:

- Inhalation may cause irritation of mucous membranes and respiratory tract.
- Eye contact may cause eye irritation.
- Skin contact may cause irritation.
- Ingestion may cause nausea and vomiting. If vomiting does occur, keep head lower than hips to prevent aspiration into lungs.

4. FIRST AID PROCEDURES

Inhalation: Remove from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Eye Contact: Flush eyes with large amounts of water, occasionally lifting upper and lower lids for at least 15-20 minutes. Get medical attention.

Skin Contact: Remove contaminated clothes and shoes immediately. Wash effected area with soap or mild detergent and large amounts of water. If irritation persists, seek medical attention.

Ingestion: If swallowed administer water or milk to dilute. Contact a physician or local poison control center immediately.

5. FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS: Reacts explosively with iodine pentafluoride + tetrafluoroethylene (the pentafluoride reacts exothermically with the inhibitor and initiates explosive polymerization of the TFE). When heated to decomposition it emits acrid smoke and irritating fumes.

FIRE AND EXPLOSION HAZARD: Combustible liquid. Keep away from heat, sparks, and flame.

FLASH POINT: Closed cup 112°F

FLAMMABLE LIMITS: LEL: 0.7% UEL: 6.1%

EXTINGUISHING MEDIA:

SPECIAL FIRE FIGHTING PROCEDURE: Wear protective clothing to prevent contact with skin and eyes.

EXTINGUISHING MEDIA: Use CO₂, foam or dry chemical.

FIRE RESPONSE PROCEDURES: Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind. Do not enter fire area without structural fire fighter's protective equipment including NIOSH approved self contained breathing apparatus in positive pressure mode. Use carbon dioxide extinguisher or foam for small fires. Large fires are best controlled by alcohol foam, fog or water spray. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Water may be used to flush spills away from exposures and to dilute spills to non-combustible mixtures.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Shut off ignition sources. Stop leak if you can do it without risk. Use water spray to reduce vapors. Take up with sand or other absorbent material and place into containers for later disposal.

LARGE SPILL: Dike far ahead of spill for later disposal. No smoking, flames or flares in hazard area. Dispose of material in accordance with federal, state, and local regulations. Keep unnecessary people away; isolate hazard area and deny entry.

REPORTABLE QUANTITY (RQ): None established.

7. HANDLING AND STORAGE

Store in a well-ventilated place, away from sources of ignition and direct sunlight. Store at 15°C to 30°C (59°F to 86°F).

OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN STORING OR DISPOSING OF THIS SUBSTANCE. FOR ASSISTANCE, CONTACT THE DISTRICT DIRECTOR OF THE ENVIRONMENTAL PROTECTION AGENCY. STORE IN ACCORDANCE WITH 29CFR 1910.176

General Handling: Keep away from heat, sparks and flame. Keep container tightly closed and upright to prevent leakage. Use only with adequate ventilation. Prevent buildup of vapors. Extinguish all pilot lights and turn off heater, non explosion-proof electrical equipment and other sources of ignition during use and until all vapors are gone. Avoid contact with eyes. Avoid prolonged or repeated breathing of vapor. Avoid prolonged or repeated contact with skin.

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

VENTILATION: Provide local exhaust or general dilution ventilation. Ventilation equipment must be explosion-proof.

RESPIRATION: Respiratory protection is normally not required in well ventilated areas. However, NIOSH approved respiratory protection may be required when the material is to be used in a confined space.

CLOTHING: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance.

GLOVES: Employee must wear appropriate protective gloves to prevent contact with this substance.

EYE PROTECTION: Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

EXPOSURE LIMITS: None established

9. PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: colorless liquid with an orange oil odor
MELTING POINT: N/A
VAPOR DENSITY: (Air = 1): 4.7
VAPOR PRESSURE: (mm Hg) @ 14.4°C: <3
SPECIFIC GRAVITY: (@ 25 Deg C): 0.835-0.842
SOLUBILITY IN WATER: Insoluble
EVAPORATION RATE: (Butyl Acetate = 1): Slow
BOILING POINT: 176°C (349°F)

10. STABILITY AND REACTIVITY INFORMATION

STABILITY: Stable under normal conditions.

REACTIVITY: Will react explosively with iodine pentafluoride + tetrafluoroethylene (the pentafluoride reacts exothermically with the inhibitor and initiates explosive polymerization of the TFE). When heated to decomposition it emits acrid smoke and irritating fumes.

CONDITIONS TO AVOID: Extreme heat and open flame.

INCOMPATIBILITIES: Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

IRRITATION DATA: Mild irritant

TOXICITY DATA: Mildly toxic.

CARCINOGEN STATUS: No available data on humans.

LOCAL EFFECTS: Irritant-inhalation, skin, eyes.

ACUTE TOXICITY LEVEL: No data available

12. ECOLOGICAL INFORMATION

NO AVAILABLE DATA

13. DISPOSAL GUIDELINES

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID number is: D001. If the waste is a spent solvent, the appropriate spent solvent code should be used.

DISPOSAL SHOULD BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 40 CFR 262

OTHER DISPOSAL CONSIDERATIONS: The waste material should be treated and/or disposed of at a site authorized to handle hazardous chemical waste. Appropriate Federal, State and Local Regulatory Authorities should be contacted before discharge, treatment or disposal of waste material.

The information furnished here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

Proper shipping name: Terpene Hydrocarbons, N.O.S., (D'Limonene)

Hazard class or Division: 3

Identification Numbers: UN2319

Packing Group: III

Label(s) required (if not excepted): Flammable Liquid.

Packaging authorizations: Exceptions: 173.150; for small quantities of flammable liquids

Non-bulk packaging: 173.203: for liquid hazardous material in packing group III

Bulk-packaging: 173.242: for liquid hazardous material

Quantity Limitations: Passenger aircraft or railcar: 60 L

Cargo aircraft only: 220L

15. REGULATORY INFORMATION

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed

SECTION 311: Hazard Categorization (40 CFR 370) - Not Listed

SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Not Listed

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Not Listed

Reportable Quantity - Not Listed

SECTION 101(14) Reportable Quantity - Not Listed

RCRA (Resource Conservation and Recovery Act.)

40 CFR 261.33 Hazardous Waste Number: D001

NJ-RTK (New Jersey- State Right To Know)

Environmental Hazardous Substance List: Not Listed

DEA (Drug Enforcement Agency)

T960 (Terpene Hydrocarbons) - Not Listed

TSCA (Toxic Substance Control Act)

Not Listed in TSCA Inventory

16. OTHER INFORMATION

Citrus Clearing Solvent, as manufactured by Richard-Allan Scientific, is intended for legal use in laboratories and manufacturing environments.