

MATERIAL SAFETY DATA SHEET

Algonquin Products

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Telephone: 770-578-4240

Date : 01/01/11

Ref.No.: 0345

1. Product Identification:

PRODUCT NAME: Formula 345
Synonyms or Description: NATURAL BASED CLEANER

HMIS CODES: **H** **F** **R** **C**
 1 1 0

2. Composition/Information on Ingredients:

Chemical Name	CAS#	Wt %.
D'LIMONENE	5989-27-5	20% to 30%

Unless listed immediately above, the product contains no hazardous ingredients as listed on the Massachusetts Hazardous Substance List or under §1910.1200 of Title 29 of the Code of Federal Regulations.

3. Hazards Identification:

Emergency Overview

CAUTION - Product is combustible. Slippery when spilled.

Likely Routes of Exposure: Eye contact, skin contact, inhalation. Eyes - causes moderate to severe irritation. Skin - may cause slight redness. Prolonged or repeated exposure may cause drying of the skin. Inhalation - may cause nose, throat, and pulmonary tract irritation, coughing, headache. Ingestion - not likely to be toxic, but may cause vomiting, headache and other medical problems.

INHALATION: Based on toxicity of similar compounds, exposure may irritate respiratory tract.

INGESTION: Relatively non-toxic. May cause some gastrointestinal upset and temporary central nervous system depression. Effects appear more severe in individuals with kidney problems.

SKIN CONTACT: Mild irritant and defatting agent, especially on prolonged contact.

EYE CONTACT: May cause transitory stinging and tearing.

CHRONIC EXPOSURE: None known.

AGGRAVATION OF PRE-EXISTING CONDITIONS: None known.

4. First Aid Measures:

INHALATION: If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

INGESTION: Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately. If possible, do not leave individual unattended.

SKIN CONTACT: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.

EYES: If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

NOTE TO PHYSICIANS: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this

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material: skin, lung (for example, asthma-like conditions), liver, kidney, blood-forming system, immune system, auditory system, eye, individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

5. Fire Fighting Measures:

FIRE:

Flash Point: 85 F <= 141 F

Boiling Point: > 95 F

Flammable limits in air % by volume: Not Established

EXPLOSIVE HAZARDS: Containers may explode in heat or fire.

FIRE EXTINGUISHING MEDIA: Dry chemical, foam, water or carbon dioxide.

SPECIAL INFORMATION: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Move exposed containers from fire area, if it can be done without risk. Use water to keep fire-exposed containers cool. Many solvent vapors are heavier than air. Use where there is no danger vapors will concentrate. Do not use near open flames, sparks, or heat.

6. Accidental Release Measures:

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment. Isolate hazard area. Keep unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect material in an appropriate container. Liquids may be absorbed with an inert material (e.g. vermiculite, dry sand, earth), and place in a chemical waster container. Do not use combustible materials such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse any vapors, to protect personnel attempting to stop leak and to flush spills away from exposures.

7. Handling and Storage:

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since vapors are difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death. Sealed containers may rupture when heated. Above the flash point, explosive vapor-air mixtures may be formed. Vapors can flow along surfaces to distant ignition source and flash back.

8. Exposure Controls/Personal Protection:

Material Name	PEL (OSHA)	TWA (ACGIH)	TLV (ACGIH)
D'LIMONENE		8 h 30 ppm (AIHA)	

VENTILATION SYSTEM: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

PERSONAL RESPIRATORS (NIOSH Approved): If the exposure limit is exceeded, a full facepiece respirator with appropriate cartridge may be worn. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

SKIN PROTECTION: Wear protective clothing, including synthetic apron, boots or safety shoes with polyvinyl chloride (PVC) or neoprene. Wear coveralls with long sleeves, gauntlets and gloves of PVC or neoprene.

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EYE PROTECTION: Use chemical safety glasses and/or full face shield where splashing is possible. Maintain eye wash fountain and quick drench facilities in work area.

9. Physical and Chemical Properties:

Appearance: Water white liquid unless dyed.
Odor: Pleasant distinctive odor.
Solubility in Water: This product emulsifies when mixed with water.
Specific Gravity: 0.95
pH: Not Applicable.
Volatile (% V.O.C. by volume): 28.35
Melting Point: Not Known
Vapor Density (Air=1): Not Known
Vapor Pressure (mm Hg): Not Known
Evaporation Rate (BuAc=1): Faster than water.

10. Stability and Reactivity:

STABILITY: Stable under ordinary conditions of use and storage.
HAZARDOUS DECOMPOSITION PRODUCTS: Not known.
HAZARDOUS POLYMERIZATION: Will not occur.
INCOMPATIBILITIES: Avoid mixing with other chemicals unless reactivity is known.
CONDITIONS TO AVOID: No information found.

11. Toxicological Information:

D'LIMONENE (CAS# 5989-27-5):
Carcinogenicity: N/A NTP: TR347 OSHA: Combustible Liquid IARC: N/A
Signs & Symptoms of Acute & Chronic Exposure: Eye, skin and mucous membrane irritation
Primary Routes of Entry: Inhalation and Absorption
Medical Conditions Aggravated: Eye, skin and upper respiratory inflammation.
Acute Effects: LD50, Oral (rat): 4,400 mg/kg.
LD50, Dermal (rabbit): >2,000 mg/kg.
LD50, Dermal (mice): 5,600 to 6,600 mg/kg.
Permissible Exposure Concentration: for d-Limonene Sax Quotes:
LPR-Mus TDLo: 4800 mg/kg/8W-I: ETA
ORL-Mus TDLo: 67 mg/kg/39W-I: ETA

12. Ecological Information:

Environmental Fate: Not established
Environmental Toxicity: Not available

13. Disposal Considerations:

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Large amounts should be given to a licensed disposal agency. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local regulations.

14. Transport Information:

D. O. T. Classification (Domestic, Land):
Non classified class 55 cleaning compounds.

15. Regulatory Information:

Not Known

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16. Other Information:

DISCLAIMER:

See the product label for use directions.

The information of this Material Safety Data Sheet reflects the latest information and data that we have on hazards, properties and handling of this product under the recommended conditions of use. Any use of this product or method of application which is not described on the Label or in the Product Data Sheet is the responsibility of the user.

This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communications Regulation and Massachusetts Right to Know Law.