

MATERIAL SAFETY DATA SHEET

Updated 08-31-12

TRADE NAME: Nano Mold Coating Remover

D-LIMONENE BLEND

SECTION 1

SUPPLIER'S NAME

NANOPLAS, INC

ADDRESS

1901 GODFREY AVE., SW
GRAND RAPIDS, MI 49509

CHEMICAL NAME

Citrus Terpenes / Ethyl Hydroxy Propionate / Isobutyl Alcohol

DOT CLASSIFICATION

Combustible Liquid

CHEMICAL OR COMMON NAME PERCENT CAS NO.

Ethyl lactate 20-80 97-64-3

EMERGENCY TELEPHONE NO. = INFOTRAC

1-800-535-5053 (US & CANADA) 1-352-323-3500 (INTERNATIONAL)

COMMON NAME

d-Limonene/ Ethyl Lactate / Isobutanol

FORMULA

Blend

APPLICABLE PEL-OSHA EXPOSURE LIMITS TLV-ACGIH

None established None established

SECTION 2 HAZARDOUS INGREDIENTS

CHEMICAL OR COMMON NAME	PERCENT	CAS NO.	APPLICABLE PEL-OSHA	EXPOSURE LIMITS TWA
d-Limonene	20-80	8028-48-6	None established	AIHA 8 hour TWA = 30ppm
Isobutanol	1-50	78-83-1	100 ppm	ACGIH 8 hour TWA = 50 ppm

CARCINOGENIC INGREDIENTS

CHEMICAL OR COMMON NAME	%	REFERENCE IARC	SOURCE NTP	OSHA	OTHER
-	-	-	-	-	-

None identified

SECTION 3 HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS

Eyes Irritant.

Skin Contact May be irritating to skin. Contains a potential skin sensitizer.

Inhalation Prolonged exposure may cause irritation of mucous membranes.

Ingestion Product is harmful if swallowed.

CHRONIC HEALTH EFFECTS

None known, not listed as a carcinogen.

ROUTES OF ENTRY

Most common, skin and inhalation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Mist may cause eye/respiratory irritation with coughing.

SECTION 4 FIRST AID MEASURES

EYES	Immediately flush with water for at least 15 minutes. See a medical doctor immediately.
SKIN	Wash affected area with soap and water.
INHALATION	Remove person to fresh air. If discomfort occurs and persists, obtain medical attention.
INGESTION	See a medical doctor immediately. Do not induce vomiting.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	Water fog, carbon dioxide (CO ₂), dry chemical.
SPECIAL FIREFIGHTING PROCEDURES	Wear a self-contained breathing apparatus.
DEGREE OF FIRE AND EXPLOSION HAZARD	Moderate. Rags soaked with any solvent can present a fire hazard and should be stored in UL listed or Factory Mutual approved, covered containers. Not an explosion hazard.
HAZARDOUS DECOMPOSITION PROCEDURES	None required when completely combusted; decomposes to water and CO ₂ . However, during a fire, incomplete combustion can result in the production of CO along with an acrid and irritating smoke.

SECTION 6 ACCIDENTAL RELEASE / SPILL MEASURES

PROCEDURE FOR RELEASE OR SPILL	Cover with large quantity of absorbent material (e.g. kitty litter) and collect in drums for disposal. Clean contaminated area with soap and water.
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SECTION 7 CHEMICAL AND PHYSICAL DATA

MELTING POINT (°C)	<i>Not applicable</i>	SPECIFIC GRAVITY (H ₂ O=1)	0.894
BOILING POINT	236° F	PERCENT VOLATILE BY VOLUME (%)	97+
VAPOR PRESSURE (mmHg)	~7 @ 68°F	EVAPORATION RATE (butyl acetate=1)	0.31
VAPOR DENSITY (AIR=1)	~3	pH OF WATER DISPERSION	ND
SOLUBILITY	Partially	APPEARANCE AND ODOR	Clear, colorless to slightly yellow liquid, with a mild orange aroma.
FLASH POINT	101° F, ASTM D93	Lel	Uel
		FLAMMABLE LIMITS	

EXTINGUISHING MEDIA – Water fog, foam, CO₂

SPECIAL FIRE FIGHTING PROCEDURES

None required

INCOMPATIBILITY (materials to avoid)

Strong oxidizing agents, strong acids, halogens, peroxides, vinyl chloride, iodine pentafluoride, alkali metals aluminum and lead.

HAZARDOUS DECOMPOSITION PRODUCTS

Incomplete combustion can result in the production of CO.

ODOR THRESHOLD No data

BULK DENSITY (G/ML)

PARTITION COEFFICIENT

(n-octanol/water) No data AUTOIGNITION TEMPERATURE No data

EXPLOSIVE PROPERTIES Not applicable

OXIDIZING PROPERTIES Not applicable

SECTION 8 STABILITY AND REACTIVITY DATA

STABILITY Stable

HAZARDOUS POLYMERIZATION None known

CONDITIONS TO AVOID

None known

MATERIALS TO AVOID

Strong oxidizing agents, strong acids, halogens, peroxides, vinyl chloride, iodine pentafluoride, alkali metals, aluminum and lead.

CONTAMINANTS THAT CONTRIBUTE TO INSTABILITY

None known

INCOMPATIBILITY None known

HAZARDOUS DECOMPOSITION PRODUCTS

Incomplete combustion can result in the production of CO.

SENSITIVITY TO MECHANICAL IMPACT

None known

SENSITIVITY TO STATIC DISCHARGE None known

SECTION 9 TOXICOLOGICAL INFORMATION

EYE CONTACT

Irritant

SKIN CONTACT

No data available

SKIN ABSORPTION

No data available

INHALATION

No data available

INGESTION

No data available

ACUTE EFFECTS FROM OVEREXPOSURE

May cause irritation of the eyes.

CHRONIC EFFECTS FROM OVEREXPOSURE

None identified

(effects considered include: sensitivities, carcinogenicity, teratogenicity, mutagenicity, synergistic products, and any medical conditions generally recognized as being aggravated by exposure)

SECTION 10 ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

100% Biodegradable

ENVIRONMENTAL EFFECTS

No adverse effects known or suspected. Not listed as a toxic chemical under SARA Title III 302, 304 or 313.

SECTION 11 HANDLING AND STORAGE

HANDLING

Keep container tightly closed. Minimize exposure to air. Store in a cool, dry, well-ventilated, liquid storage area.

VENTILATION

Use adequate general or local exhaust ventilation to keep vapor and mist levels as low as possible.

STORAGE

Store in a cool dry area, away from oxidizers and acids.

SECTION 12 EXPOSURE CONTROL / PERSONAL PROTECTION

VENTILATION	
Local Exhaust	Recommended
Mechanical (general)	In most cases adequate ventilation can be achieved by use of an industrial floor or pedestal fan, combined with sizable inlet and outlet openings to the workspace, such as doors and/or windows.
EYE PROTECTION	Use chemical goggles.
GLOVES	Use impervious gloves to prevent skin contact.
SPECIAL CLOTHING AND EQUIPMENT	Aprons recommended. If clothing becomes contaminated, remove and launder before reuse.
OTHER PROTECTIVE EQUIPMENT	None identified
FOOT PROTECTION	Industrial safety shoes are recommended in all industrial settings.
OTHER ENGINEERING CONTROLS	None identified
WORK PRACTICES	Do not smoke in areas of storage or use. Avoid all contact with skin and eyes.
CONTROL MEASURES	Minimize eye and skin contact by using appropriate protective equipment. Use local or general room ventilation to control vapors or mist that may be generated into the work environment.

SECTION 13 SPECIAL PRECAUTIONS DATA

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY None required where adequate ventilation conditions exist.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid all contact with eyes or skin. Wear the appropriate protective equipment. Protect containers from physical damage.

MAINTENANCE PERSONNEL

Wash down vessels. Check the oxygen and combustible vapor content of the vessel atmosphere. Use the appropriate protective equipment.

SECTION 14 DISPOSAL PROCEDURES

WASTE DISPOSAL METHOD Take up with sand or other non-combustible absorbent material and place into container for later disposal. Wash area with soap and water. Dispose in accordance with all applicable Federal, State, and local environmental regulations. Spent product may be offered for fuel blending incineration.

SECTION 15 TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME

VertecBio Citrus I20 (under 119 gallons)

IATA	UN1993, Flammable liquids, n.o.s. (Isobutanol), 3, PG III
IMDG	UN1993, Flammable liquids, n.o.s. (Isobutanol), 3, PG III
DOT CLASSIFICATION	Combustible liquid
DOT LABELS	None required, under 119 gallons.
DOT MARKING	Not applicable
DOT PLACARD	Bulk: Combustible Liquid, 1993
IDENTIFICATION NUMBER	NA 1993
PACKAGING GROUP	III
HAZARDOUS SUBSTANCE/RQ	None
49 STCC NUMBER	Not applicable
PRECAUTIONS TO BE TAKEN IN TRANSPORTATION	None needed
OTHER SHIPPING INFORMATION	None

SECTION 16 REGULATORY INFORMATION

OSHA EXPOSURE LIMITS SUBSTANCE(S)

d-Limonene, Ethyl Lactate, Isobutanol

OSHA PEL-TWA	Isobutanol, PEL = 100 ppm
STEL	None established
CEILING	None established
SKIN DESIGNATION	None established
ACGIH TLV-TWA	Isobutanol, TWA = 50 ppm
STEL	None established
CEILING	None established
SKIN DESIGNATION	None established
TARGET ORGAN EFFECTS	Eye
CARCINOGENIC POTENTIAL	None
REGULATED BY OSHA	No
LISTED ON NTP REPORT	No
IARC GROUP 1, 2A, 2D	No
US EPA REQUIREMENTS RELEASE REPORTING CERCLA (40 CFR 302)	
LISTED SUBSTANCE(S)	Not listed
RQ	Not applicable
Category	Not applicable
RCRA waste number	Not applicable
UNLISTED SUBSTANCE(S)	d-limonene, Ethyl Lactate, Isobutanol
RQ	Isobutanol = 5000 pounds
Characteristic	Ignitability
RCRA waste number	D001
SARA TITLE III SEC 313 (40 CFR 372)	
LISTED TOXIC CHEMICAL	Not listed

**INVENTORY REPORTING SARA TITLE III SEC 311/312
(40 CFR 370)**

Substance(s) Not listed
Hazard category Not applicable
Planning threshold Not applicable
Emergency planning Not applicable

SARA TITLE III SEC 302-303 (40 CFR 355)

Listed substance(s) Not listed
RQ Not applicable
Planning threshold Not applicable

US TSCA STATUS Listed

CANADA INGREDIENT DISCLOSURE LIST SUBSTANCE(S)

CONTROLLED PRODUCT d-Limonene, Isobutanol

HAZARD SYMBOLS

CLASS AND DIVISION Class B, Division 3

PRODUCT IDENTIFICATION NO.

DOMESTIC SUBSTANCE LIST Listed

CEPA PRIORITY LIST Not listed

SECTION 17 ADDITIONAL INFORMATION

No additional information available at this time.

SECTION 18 HMIS LABEL

HEALTH 1 FLAMMABILITY 2 REACTIVITY 0 PERSONAL PROTECTION

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