

1254 Chestnut Street Newton, MA 02464-1418 Tel: (617) 965-5511 Fax: (617) 965-5818

# MATERIAL SAFETY DATA SHEET

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SECTION 1. CHEMICAL IDENTIFICATION ------

CHEMICAL NAME:	Organic Solvent Mixture
TRADE NAME:	NANO <sup>™</sup> T Thinner
	Positive Radiation Thinner
PRODUCT #:	G013100

SECTION 2. COMPOSITION-----

HAZARDOUS INGREDIENTS: Cyc

Cyclopentanone (CAS: 120-92-3); 80-90% Tetrahydrofurfuryl alcohol (CAS: 97-99-4); 10-20%

SECTION 3. HAZARD DATA-----

INFLAMMABILITY: Flammable liquid.
SKIN CONTACT: May cause skin irritation.
EYE CONTACT: May cause serious damage to the eyes.
INGESTION: May be harmful if swallowed.
INHALATION: Irritating to mucous membranes and upper respiratory tract.
MUTAGENICITY: Not known to be mutagenic.
CARCINOGENICITY: Not considered carcinogenic by NTP, IARC and OSHA
TARGET ORGANS:Eyes, Respiratory Tract

SECTION 4. FIRST AID MEASURES------

INHALATION:	If inhaled, remove to fresh air. If patient has stopped breathing, give artificial respiration. If breathing is difficult give oxygen. Contact physician immediately.
INGESTION:	Call local poison control center for assistance. Get medical attention immediately.
SKIN CONTACT:	Rinse with water for 15 minutes while removing contaminated clothing and shoes. Wash affected area with soap and water. Wash contaminated clothing.
EYE CONTACT:	Rinse immediately with water, flush for 15 min. lifting eyelids frequently. Get emergency medical assistance.

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SECTION 5. FIRE FIGHTING MEASURES		
EXTINGUISHING MEDIA SPECIAL FIRE FIGHTING		
PRECAUTIONS:	Wear self-contained breathing apparatus (SCBA) and personal protective equipment to prevent contact with skin and eyes.	
UNUSUAL FIRE OR		
EXPLOSION HAZARDS:	Vapor may travel considerable distance to source of ignition and flash back. Heat will build pressure and may rupture closed containers. Forms explosive mixtures in air. Keep containers cool with water spray.	

### SECTION 6. ACCIDENTAL RELEASE PROCEDURES -----

### Evacuate Area.

Eliminate all ignition sources.

Wear self-contained breathing apparatus (SCBA), rubber boots, and heavy rubber gloves. Avoid eye or skin contact. Cover with dry absorbent material and collect in closed container for disposal using non-sparking tools. Ventilate area and wash spill sites after material pickup is complete, rinse with water. All clean up should be carried out in accordance with federal, state, and local regulations. If required proper authorities should be notified.

## SECTION 7. STORAGE AND HANDLING PRECAUTIONS------

STORAGE:	Store in tightly closed container in a cool environment away from direct sunlight.
HANDLING:	<ul> <li>Highly flammable. Keep away from heat, sparks, and flames.</li> <li>Take precautions against static discharge.</li> <li>Do not breathe vapors.</li> <li>Use only with mechanical exhaust.</li> <li>Do not contact with skin, eyes, and clothing.</li> <li>Severe eye irritant.</li> <li>Avoid prolonged or repeated exposure.</li> <li>Wear heavy rubber gloves.</li> <li>Wash with soap and water after handling.</li> <li>Have safety shower and eye wash available.</li> </ul>

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION------

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RESPIRATORY	
PROTECTION:	In case of spills, use of self-contained breathing apparatus (SCBA) is recommended.
VENTILATION:	Local or general mechanical ventilation is required.
SKIN PROTECTION:	Heavy rubber gloves are highly recommended.
EYE PROTECTION:	Safety goggles are highly recommended.

### SECTION 9. PHYSICAL AND CHEMICAL DATA-----

APPEARANCE: ODOR: BOILING POINT: SPECIFIC GRAVITY: VAPOR PRESSURE: VAPOR DENSITY: H<sub>2</sub>O SOLUBILITY: % VOLATILES: EVAPORATION RATE: FLASH POINT: AUTOIGNITION TEMP: EXPLOSION LIMITS: Colorless to pale yellow liquid Slightly sweet 132-178 °C (268-352 °F) 0.962 8.7 mm @ 20 °C (68 °F) 2.3 (air=1) 40-50% @ 20 °C, by wt. 100% by wt 1 (BuAc=1) 30 °C (27 °F) TCC 550 °C (525 °F) 1.3 lower unk. upper

# SECTION 10. REACTIVITY DATA -----

STABILITY: INCOMPATIBILITY:	Stable Strong Oxidizing Agents, Strong Bases, Strong Reducing Agents
HAZARDOUS POLYMERIZATION:	
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:	Carbon Monoxide, Carbon Dioxide

### SECTION 11. TOXICITY HAZARDS------

#### ACUTE EFFECTS:

May be harmful if swallowed, inhaled, or absorbed through the skin. Irritating to eyes and respiratory tract. May cause serious damage to the eyes. Vapor or mist is irritating to the eyes, mucous membranes and upper respiratory tract. Eye and skin contact can cause headache, nausea, vomiting, dizziness, weakness, drowsiness, narcosis, and loss of coordination in humans. Causes moderate skin irritation in rabbits. Prolonged and/or repeated exposure can cause absorption of harmful amounts of material.

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CHEMICAL NAME: TRADE NAME: PRODUCT #:	NĂNO™ T	vent Mixture Thinner liation Thinner
ORAL:	LD50 (rat): LD50 (rat)	2000 mg/kg as Cyclopentanone 1600 mg/kg as Tetrahydorfurfuryl alcohol
IRRITATION:	skin: eyes:	500 mg mild 100 mg severe
TLV: PEL:	ACGIH(TWA) OSHA (8hr TV	WA) none established none established

### SECTION 12. ECOLOGICAL DATA-----

No data available at this time

# SECTION 13. DISPOSAL CONSIDERATIONS------

Burn in an EPA-licensed chemical incinerator equipped with an afterburner and scrubber at an approved waste disposal facility. Observe all federal, state, and local environmental regulations.

## SECTION 14. TRANSPORTATION INFORMATION------

HAZARD CLASSIFICATION:
SHIPPING NAME:
UN NUMBER:
PACKING GROUP

Flammable Liquid Cyclopentanone Mixture UN 2245 III

### SECTION 15. REGULATORY INFORMATION------

HAZARDOUS LISTINGS:	All ingredients appear on the TSCA Inventory of Chemical Substances, EINECS, and the Japan Hazardous Chemical Listing.
SARA Title III:	This product IS NOT subject to SARA Title III, Section 313 Reporting Requirements.

Calif. SCAQMD Rule 443.1 VOC's: 962 g/l; vapor pressure 8.7 mm Hg @ 20 °C

### SECTION 16. ADDITIONAL PRECAUTIONS AND COMMENTS------

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