



Nanocor, Inc  
 1500 West Shure Drive • Arlington Heights, IL 60004  
 Tel: (847) 394-8844 • Fax: (847) 394-9040

**MATERIAL SAFETY DATA SHEET** - May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements

**PRODUCT NAME: NANOMER, I.30T**

**Section I MANUFACTURER'S INFORMATION**

**Manufacturer's Name and Address:** Nanocor, Inc.  
 1500 West Shure Drive  
 Arlington Heights, Illinois 60004

**EMERGERNCY CONTACT: CHEMTREC® (800) 424-9300**

**Telephone Number for Information: (847)394-8844**  
**Date Prepared: July 2, 2002**

**SECTION II HAZARDOUS INGREDIENTS/ IDENTITY INFORMATION**

**HAZARDOUS COMPONENTS:**

(Specific Chemical Identity	Common Names CAS #	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Crystalline Quartz	14808-60-7				<2%
Respirable Crystalline Quartz Present (TWA)		0.1 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>	NIOSH 50 ug/m <sup>3</sup>	-
Proposed (TWA)			50 ug/m <sup>3</sup> TWA	-	-
Nuisance Dust:					
Respirable		5mg/m <sup>3</sup>	5mg/m <sup>3</sup>		
Total Dust		15mg/m <sup>3</sup>	10mg/m <sup>3</sup>		

\* **WARNING:** This product may contain a small amount of crystalline silica, which may cause delayed respiratory disease if inhaled over a prolonged period of time. Avoid breathing dust. Use NIOSH/MSHA approved respirator where TLV for crystalline silica (quartz) may be exceeded. IARC Monographs on the evaluation of the Carcinogenic Risk of Chemicals to Humans (volume 68, 1997) concludes that crystalline silica is carcinogenic to humans in the form of quartz. IARC classification 1.

The small quantities of crystalline silica (quartz) found in this product are, under normal conditions, naturally coated with an unremovable layer of amorphous silica and/or bentonite clay. IARC (Vol., 68,1997, PP 191-192) has stated that crystalline silica (quartz) can differ in toxicity depending on the minerals with which it is combined, citing studies in IARC (Vol., 42, 1987, P 86.) which stated that the toxic effect of crystalline silica (quartz) is reduced by the "protective effect...due mainly to clay minerals..."

National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m<sup>3</sup>) as determined by a full shift sample up to a 10 hour working day, 40 hours per week. See: 1974 NIOSH criteria for a recommended Standard for Occupational Exposure to Crystalline Silica should be consulted for more detailed information.

**PRODUCT NAME: NANOMER, I.30T**

**Section II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION CONT.**

**PRODUCT IDENTIFICATION**

**Chemical Family:** Onium Ion Modified Montmorillonite

**Chemical Name:** Surface Modified Clay

**CAS No.** 1318-93-0 Montmorillonite

124-30-1 Octadecylamine

**FORMULA:** Montmorillonite Clay 70 ~ 85 wt%

Octadecylamine 15 ~ 30 wt%

**NFPA/HMIS:** Health - 1, Fire - 0, Reactivity - 0, Specific Hazard - See Section VI

**DOT Class:** Not Regulated

**Section III PHYSICAL/CHEMICAL CHARACTERISTICS**

<b>Boiling Point</b>	N/A	Specific Gravity (H <sub>2</sub> O=1)	Approx. 1.7
<b>Vapor Pressure (mm Hg.)</b>	NA	Melting Point	N/A
<b>Vapor Density (AIR=1)</b>	N/A	Evaporation Rate (Butyl Acetate =1)	N/A
<b>Solubility in Water</b>	Negligible		
<b>Appearance and Odor</b>	White to Gray with negligible odor		

**Section IV FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	N/A
Flammable Limits (% by volume)	N/A LEL 0.07 oz./cu.ft. - UEL--
Extinguishing Media	For dust fire, use CO <sub>2</sub> , dry chemical, water fog
Special Fire Fighting Procedures	None Known
Unusual Fire and Explosion Hazards	Does not typically present a fire or dust explosion hazard; however, dust concentration of 0.07 oz./cu.ft. may ignite at 510 <sup>0</sup> C or when exposed to ignition source.

**Section V REACTIVITY DATA**

Stability Unstable - Conditions to Avoid - None Know Stable - X

Incompatibility (Material to Avoid) - None Known

Hazardous Decomposition or By-products - Possible generation of CO, NO<sub>x</sub>,

Hazardous Polymerization May Occur - Conditions to Avoid - None Known  
Will Not Occur - X

**PRODUCT NAME: NANOMER, I.30T**

---

**Section VI****HEALTH HAZARD DATA**

---

**Route(s) of Entry:**    **Inhalation? Yes**    **Skin? No**    **Ingestion? Yes****Health Hazards (Acute and Chronic):**

Inhalation: Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects:

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness or breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (group 1 - carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibers (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as “reasonably anticipated to be a carcinogen”. For further information See: “Adverse Effects of Crystalline Silica Exposure” published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine, Volume 155, page 761-765, 1997.

**Other Data with Possible Relevance to Human Health:**

The small quantities of crystalline silica (quartz) found in this product are, under normal conditions, naturally coated with an unremovable layer of amorphous silica and/or bentonite clay. IARC (vol. 68, 1997, pg. 191-192) has stated that crystalline silica (quartz) can differ in toxicity depending on the minerals with which it is combined, citing studies in IARC (Vol. 42, 1987, pg. 86) which stated that the toxic effect of crystalline silica (quartz) is reduced by the “protective effect....due mainly to clay minerals...”.

**Carcinogenicity:**    NTP? No    IARC Monographs? Yes    OSHA Regulated? No**Signs and Symptoms of Exposure:**

Excessive inhalation of dust may result in shortness of breath and reduced pulmonary function. Continued exposure to mucous membranes may cause irritation. Eye contact can cause irritation.

**PRODUCT NAME: NANOMER, I.30T****Medical Conditions Generally Aggravated by Exposure:**

Individuals with respiratory disease, including but not limited to, asthma and bronchitis, or subject to eye irritation should not be exposed to respirable crystalline silica (quartz) dust.

**Emergency and First Aid Procedures**

Skin	Wash with soap and water for good hygiene
Eyes	Flush with water for at least 15 minutes get medical attention if needed.
Gross Inhalation of Dust	Remove to fresh air, give oxygen or artificial respiration if necessary; get medical attention
Ingestion	Drink plenty of water, do not induce vomiting, get medical attention if needed.

---

**Section VII PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**Steps to be taken in case material is released or spilled** -Remove all sources of ignition, ventilate area of leak or spill. Clean-up personnel require protective clothing and respiratory protection from vapors. Avoid adding water, the product will become slippery when wet.

**Waste disposal method** - Follow federal, state and local regulations for solid waste.

**Precautions to be taken in handling and storing** -Use properly grounded electrical equipment to prevent static discharge. Keep away from open flame, heat or other ignition sources. Avoid breathing dust, use NIOSH/MSHA approved respirator where TLV limits for Crystalline silica may be exceeded.

---

**Section VIII CONTROL MEASURES**

---

Respiratory Protection (Specify Type) - OSHA standard 1910.134 or ANSI Z88.2-1980 specification.

Ventilation	- Local Exhaust	- As appropriate	Special	- None
	- Mechanical (General)	- As appropriate	Other	- None
Protective Gloves	- Recommended		Eye Protection	- Recommended
Other Protective Clothing or Equipment	- None			
Work/ Hygienic Practices	- Use good housekeeping practices			

---

**Section IX REGULATORY INFORMATION**

---

**SARA 311/312:** Hazard Categories for SARA Section 311/312 Reporting Chronic Health

SARA 313: This product contains the following chemicals subject to annual release reporting requirements under the SARA section 313 (40 CFR 372): None

PRODUCT NAME: NANOMER, I.30T

---

**Section IX REGULATORY INFORMATION CONTINUED...**

---

**California Proposition 65:** *This product contains the following substances known to the state of California to cause cancer and/or reproductive harm: This product contains crystalline silica (respirable); however, the user should note that the small quantities of crystalline silica (quartz) found in this product are, under normal conditions, naturally coated with an unremovable layer of amorphous silica and/or bentonite clay. IARC (Vol. 68, 1997, pg. 191-192) has stated that crystalline silica (quartz) can differ in toxicity depending on the minerals with which it is combined, citing studies in IARC (vol. 42, 1987, pg. 86) which stated that the toxic effect of crystalline silica (quartz) is reduced by the “protective effect.....due mainly to clay minerals....”.*

**Toxic Substances Control Act:** All of the components of this product are listed on the EPA TSCA Inventory or are exempt from notification requirements.

**European Inventory of Commercial Chemical Substances:** All the components of this product are listed on the EINECS Inventory or exempt from notification Requirement. (The EINECS number for Quartz: 231-545-5)

**Canadian Environmental Protection Act:** All the components of this product are listed on the Canadian Domestic Substances List or exempt from notification requirements.

**Japan MITI:** All the components of this product are existing chemical substances as defined in the Chemical Substance Control Law.

**Australian Inventory of Chemical Substances:** All the components of the product are listed on the AICS Inventory or exempt from notification requirements.

**Canadian WHMIS Classification:** Class D, Division 2, Subdivision A (Very Toxic Material causing other Toxic Effects)

**NF-+PA Hazard Rating:** Health: 1 Fire: 0 Reactivity: 0

**NMIS Hazard Rating:** Health: 1\* Fire: 0 Reactivity: 0

\* **Warning:** Chronic health effect possible - inhalation of silica dust may cause lung injury/disease (silicosis). Take appropriate measures to avoid breathing dust. See Section II.

**PRODUCT NAME: NANOMER, I.30T**

---

**Section IX REGULATORY INFORMATION CONTINUED...**

---

References: Registry for Toxic Effects of Chemical Substances (TRECS), 1995  
Patty's Industrial Hygiene and Toxicology  
NTP Seventh Annual Report on Carcinogens, 1994  
IARC Monograph Volume 68, Silica, Some Silicates and Organic Fibers, 1997

The information herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge. However, Nanocor cannot give any guarantees regarding information from other sources, and expressly does not make any warranties, nor assumes any liability for its use.