



## NYACOL DP5370EG MSDS

### MATERIAL SAFETY DATA SHEET

#### 1. Chemical Product and Company Identification

Trade Name: NYACOL® DP5370EG Zinc Oxide Sol  
Chemical Name: Zinc Oxide  
Synonyms: None  
Product Code: DP5370EG  
Use: UV Absorber  
Manufacturer: Nyacol Nano Technologies, Inc.  
Megunko Road, P.O. Box 349, Ashland, MA 01721 U.S.A.  
Emergency Telephone: 508-881-2220

#### 2. Composition / Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>Exposure Limits</u>	<u>Percent By Weight</u>
Zinc Oxide	1314-13-2	5mg/M <sup>3</sup> Respirable Dust	18
Polyacrylic Acid, Sodium Salt, Sodium Sulfonate Terminated	68479-09-4	None	4
Ethylene Glycol	107-21-1	None	78
<u>Component</u>	<u>EINECS #</u>	<u>RTECS #</u>	<i>* Non-hazardous.</i>
Zinc Oxide	215-222-5	ZH4810000	<i>Identity considered</i>
Ethylene Glycol	203-473-3	KW2975000	<i>a trade secret.</i>

#### 3. Hazard Identification

##### EMERGENCY OVERVIEW

Tan Liquid - No Odor  
Keep Spills Out Of Surface Waters

##### Potential Health Effects / Health Hazard Identification

###### Acute Exposure:

Eye: Irritation.  
Skin: Irritation.  
Ingestion: May cause nausea and vomiting. Toxicity follows 3-stage progression: (1) central nervous system effects including paralysis of eye muscles, convulsions, coma. Metabolic acidosis and cerebral swelling may also occur. (2) cardiopulmonary system with symptoms of hypertension, rapid heartbeat, and possible cardiac failure. (3) severe kidney abnormalities including possible renal failure.

Inhalation: Irritation.  
Chronic Exposure: May cause kidney injury.

###### Other Hazards

Known Synergists: Not available.  
Explosion Hazard: Not available.  
Fire Hazard: Not available.  
Corrosion Hazard: Not available.

#### 4. First Aid Measures

Eye Contact: Flush eyes with large quantities of water. If irritation persists get medical attention. Do not allow victim to rub eyes or keep eyes closed.  
Skin Contact: Wash well with soap and water.

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#### 4. First Aid Measures, continued

Ingestion:	If swallowed seek medical attention immediately. Do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person.
Inhalation:	Remove person from exposure source, consult medical professional.
First Aid Facilities:	Eye wash station.
Advice to Physicians:	Ethanol may inhibit methanol metabolism.

#### 5. Fire Fighting Measures

Not Flammable:	Material will not burn in a fire. Containers can build pressure if exposed to heat or fire.
Extinguishing Media:	In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Water or foam may cause frothing. Use agent most appropriate to extinguish fire.
Protective Equipment:	Wear standard full firefighter turn-out gear (full bunker gear) and respiratory protection (SCBA).
Special Exposure Hazard:	None known.

#### 6. Accidental Release Measures

Leaks and Spills:	Contain spill or leak with sand, clay or absorbents. Recover liquid for recycle or disposal. Do not allow spills into sewers or surface waters. Place absorbents, waste products and contaminated soil into containers for disposal.
Personal Protection:	Eye protection and impervious gloves. An approved air-purifying respirator should be worn if dust or mist is present.

#### 7. Handling and Storage

Handling:	Avoid generating mist or dust during use.
Storage:	Store in cool dry area. Do not freeze.

#### 8. Exposure Controls/Personal Protection

Engineering Control:	Exhaust ventilation; keep airborne concentrations below exposure limits.
Respiratory Protection:	When respiratory protection required or concentration unknown, use approved air-purifying respirator with dust cartridge.
Skin Protection:	Clean body-covering clothing; impervious gloves such as neoprene.
Eye Protection:	Wear approved safety glasses.

#### 9. Physical and Chemical Properties

NYACOL® DP5370EG is an ethylene glycol-based material.

Appearance:	Tan liquid.
Odor:	None.
Physical State:	Liquid.
pH:	10 - 12
Boiling Point:	195°C (383°F)
Freezing Point:	-13°C (8.6°F)
Flash Point:	111°C (231.80°F)
Vapor Pressure:	0.05mm Hg at 20°C
Oxidizing Properties:	Not an oxidizer.
Solubility in Water:	Soluble in all proportions.
Density:	1290 Kg/M <sup>3</sup>
Specific Gravity:	1.29
Volatile by Weight:	82%
Viscosity:	20 cPs.
Explosion Limits:	Not applicable.
Partition Coefficient:	Not available.
Evaporation Rate:	Slow (Butyl Acetate = 1)

## 10. Stability and Reactivity

Chemical Stability: Stable.  
Conditions To Avoid: Neutralization by acidic materials, moisture, and heat.  
Incompatibility With Other Materials: Not available.  
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.  
Hazardous Polymerization: Has not been reported.

## 11. Toxicological Information

<u>Material</u>	<u>LD<sub>50</sub>, Rat, Oral</u>
Zinc Oxide	7950 mg/kg Mouse.
Ethylene Glycol	4700 mg/kg.
Polyacrylic Acid, Sodium Salt, Sodium Sulfonate Terminated	>5,000 mg/kg.

### Effects

Eye Effects: Irritation: Rabbit 500 mg/24 hours; mild  
Skin Effects: LD<sub>50</sub> Rabbit: 9530 uL/kg  
Inhalation Effects: Not available.  
Ingestion Effects: Not available.

## 12. Ecological Information

Ecotoxicity: Not available.  
Persistence: Not available.

## 13. Disposal Considerations

Disposal Considerations: Dry to solids. Solids should be put in a landfill approved for chemical waste.  
United States: Not an RCRA-regulated waste.

## 14. Transport Information

<u>Regulations</u>	<u>Shipping Name</u>	<u>Hazard Class</u>	<u>Packing Group</u>	<u>U.N. Number</u>
U.S. D.O.T.	Not applicable	Not applicable	Not applicable	Not applicable
ICAO / IATA	Not applicable	Not applicable	Not applicable	Not applicable
IMO / IMDG	Not applicable	Not applicable	Not applicable	Not applicable
ADR	Not applicable	Not applicable	Not applicable	Not applicable

## 15. Regulatory Information

### U.S. Federal Regulations

EPA TSCA Inventory: All ingredients listed.  
SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

<u>Chemical Name</u>	<u>CAS #</u>	<u>Percent By Weight</u>
Zinc Oxide	1314-13-2	18
Ethylene Glycol	107-21-1	78

U.S. D.O.T. Regulations: See Section 14.

### U.S. State Regulations

California Proposition 65: No ingredients listed.  
State Right-to-Know Laws: Section 2 of this MSDS lists all components of DP5370EG.

### Canadian Regulations

Domestic Substance List: All ingredients listed.  
Transportation of Dangerous Goods (TDG): Does not meet dangerous goods criteria.

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## 15. Regulatory Information, continued

This MSDS contains all the information items specified in Schedule 1, Column 3 of the Controlled Products Regulations in a 16-heading format.

### EEC Regulations

Classification:	Does not meet dangerous goods criteria.
Symbol:	Not applicable.
Risk Phrases:	Not applicable.
Safety Phrases:	Not applicable.

## 16. Other Information

NFPA 704 Hazard Rating:	Health – 2, Flammability – 0, Instability – 0, Special – None
HMIS® Hazard Rating:	Health – 2, Flammability – 0, Reactivity – 0 Protective Equipment – B: eye protection, gloves

Recommended Use: DP5370EG is recommended for use as an UV absorber. Other uses have not been investigated and may have other hazards. For industrial use only, not for food, drug or home use.

Workers using DP5370EG should read and understand this MSDS and be trained in the proper use of this material.

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