

## Section 1. Product and Company Identification

Product Name: UN-NANOSILVER  
Product Information: UN-NANOSILVER is an aqueous suspension of silver nano particles.

Company Name: United Nanotech Products Limited  
Address: 27B Camac Street, 8<sup>th</sup> Floor, Kolkata, West Bengal 700016, India  
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## Section 2. Composition / Information on Ingredients

Chemical Name: Silver Nanoparticles; Tri Sodium Citrate; Water  
CAS no.: Mixture  
Active component: 10 ppm

## Section 3. Hazards Identification

### Emergency Overview:

OSHA Hazards: No known OSHA Hazards. Not a dangerous substance according to GHS.

### HMIS Classification:

Health Hazard: 0

Flammability: 0

Physical Hazards: 0

### Inhalation:

May be harmful if inhaled in excess amount.

### Skin Contact:

Prolonged exposure may cause skin irritation.

### Eye Contact:

May cause eye irritation. Prolonged exposure may cause eye damage.

### Ingestion:

Over dosage ingestion may be harmful.

## Section 4. First – Aid Measures

### Inhalation:

If breathed in, move person to fresh air. If not breathing, give artificial breathing.

### Skin Contact:

Promptly wash contaminated area with plenty of water. Seek medical attention if irritation persists.

### Eye Contact:

Promptly wash eyes with water. Seek medical attention if irritation persists.

### Ingestion:

Seek medical attention in case of over dosages.

## Section 5. Fire Fighting Measures

No precaution required, as the product is water-based and non-inflammable.

## Section 6. Accidental Release Measures

**Spill & Leak Measures:** Small spills can be swept up or diluted flushed with water to dilute according to local, state and federal disposal guidelines. Solid surface should be wiped with a detergent-based cleaner to clean any remaining materials.

## Section 7. Handling and Storage

**Handling:** Avoid prolonged or repeat exposure.

**Storage:** The product should be stored at temperatures within the range 5-55°C. Storage conditions should also be in conformance with applicable legal, fire and insurance regulations.

## Section 8. Exposure Control / Personal Protection

Engineering measures: Normal room ventilation is usually adequate. If necessary, use appropriate local exhaust ventilation to keep exposures below the regulated limits.

### Personal Protective Equipment:

**Eyes/Face:** Always wear approved safety equipments when handling a chemical substance in the laboratory.

**Skin:** Wear protective clothing and gloves.

**Respiratory:** Under normal conditions of use, inhalation of product is unlikely. Wear OSHA/NIOSH approved respirator if aerosol or mist is encountered.

**General:** No additional protection required.

## Section 9. Physical and Chemical Properties

**Appearance:** Yellow suspension

**Form:** Liquid

**Colour:** Yellow

**Odour:** Nil

**pH:** 7.5 – 8.5

**Specific gravity:** 1.00 – 1.02

**Solubility (Water):** Miscible

**Solubility (Oil):** No

## Section 10. Stability and Reactivity

**Chemical Stability:** Stable under ordinary conditions of use and storage.

**Hazardous Reactions:** Nil

**Hazardous Decomposition Product(s):** Nil

**Conditions to avoid:** High and very low temperature. Product is stable in the temperature range 5-55°C

**Corrosivity:** Non-corrosive

**Polymerisation:** Will not occur

## Section 11. Toxicology Information

### Health Effects:

Inhalation (LC<sub>50</sub>): No data available

Skin Contact (Dermal – LD<sub>50</sub>): No data available

Ingestion (Oral – LD<sub>50</sub>): No data available

Primary Skin Irritation: Prolonged exposure may cause skin irritation

Eye Contact: May cause eye irritation

Sensitisation: No data available

Toxicology: Mild toxic on over doses.

### Chronic Potential Health Effects:

May cause argyria (a slate grey or bluish discoloration of the skin and deep tissues to the deposit of insoluble albuminate of silver).

## Section 12. Ecological Information

### Environmental Hazards:

Persistence and Degradation: The product is biodegradable when diluted below the minimum inhibitory concentration and does not bioaccumulate.

Toxicity: The product does not contain any toxic materials.

This product and possible degradation products are not considered to be environmentally persistent or toxic.

## Section 13. Disposal Considerations

**A: General Product Information:** None identified.

**B: Component Waste Numbers:** No EPA Waste Numbers are applicable for this product's components.

**C. Disposal Instructions:** Absorbed material should stand for 48 hours in vented containers to avoid pressure buildup. Prior to disposal, residual contents of containers should be drained into the product to be preserved. To ensure that containers are not reused, they should be pierced before disposal.

## Section 14. Transport Information

The original containers should always be used for safe storage and transport. Should it be necessary to transfer to alternative containers please contact United Nanotech Products Ltd.

## Section 15. Regulatory Information

DSCL (EEC): R36- Irritating to eyes. R40- Possible risks of irreversible effects. S2- Keep out of the reach of children. S36/37- Wear suitable protective clothing and gloves.

Personal Protection: A

OSHA Hazard Category: Mild skin and eye irritant.

EPCRA 311/312 Hazard Category: No data available

Protective Equipment: Gloves. Lab coat. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

## Section 16. Other Information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is responsibility of the user.

### Abbreviations:

DSCL - Dangerous Substances Classification and Labeling (Europe)

EPA: Environmental Protection Agency

EPCRA: Emergency Planning and Community Right-to-Know Act

LD<sub>50</sub>/LC<sub>50</sub> - Lethal Dose/Concentration kill 50%

OSHA: Occupational Safety and Health Administration