



Not classified

**Physical hazards**

Not classified

**hazard statements**

Not applicable

**Precautionary Statements**

Not applicable

**Principle Routes of Exposure/**

**Potential Health effects**

<b>eyes</b>	May cause eye irritation with susceptible persons.
<b>Skin</b>	May cause skin irritation in susceptible persons.
<b>Inhalation</b>	May be harmful by inhalation.
<b>INGESTION</b>	May be harmful if swallowed.

**Specific effects**

<b>Carcinogenic effects</b>	None.
<b>Mutagenic effects</b>	None.
<b>Reproductive toxicity</b>	None.
<b>Sensitisation</b>	None.

4. First Aids Measures

<b>Skin contact</b>	Rinse cautiously with water for several minutes. Immediate medical attention is not required.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
<b>INGESTION</b>	Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.
<b>Inhalation</b>	Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

**Most important symptoms and effects, both acute and delayed**

Not applicable

**Notes to Physician** Treat symptomatically

5. Fire-Fighting Measures

<b>Suitable extinguishing media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Foam. Dry chemical.
<b>Special protective equipment for firefighters</b>	Standard procedure for chemical fires.
<b>Specific hazards arising from the chemical</b>	Not known

## 6. Accidental Release Measures

<b>Personal precautions</b>	Always wear recommended Personal Protective Equipment. Use personal protection equipment.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material.
<b><u>Environmental precautions</u></b>	No special environmental precautions required.

## 7. Handling and Storage

<b>Handling</b>	Always wear recommended Personal Protective Equipment. Wear personal protective equipment.
<b>Storage</b>	Keep in a dry, cool and well-ventilated place.

## 8. Exposure Controls / Personal Protection

### **Exposure Limits**

At this time, the limited evidence available suggests caution when potential exposures to nanoparticles may occur. Due to the limited information about health risks from nanomaterials, it is prudent to take steps for minimizing worker exposures. Research is still needed to understand the impact of nanotechnology on health, and to determine appropriate exposure monitoring and control strategies

**Engineering measures** Ensure adequate ventilation, especially in confined areas.

### **Personal protective equipment**

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Hand Protection</b>	Impervious gloves.
<b>Eye protection</b>	Safety glasses with side-shields.
<b>Skin and body protection</b>	Lightweight protective clothing.
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No special environmental precautions required.

## 9. Physical and Chemical Properties

General information

Form	liquid
Appearance	no data available
Odour	no data available

Odour Threshold	no data available
Boiling point / boiling range	°C no data available °F no data available
Melting point / melting range	°C no data available °F no data available
flash point	°C no data available °F no data available
Autoignition temperature	°C no data available °F no data available
Evaporation rate	no data available
Flammability (solid, gas)	no data available
Oxidising properties	no data available
Water solubility	no data available
Upper explosion limit	no data available
Lower explosion limit	no data available
Partition coefficient:	
n-octanol/water	no data available
Vapour Pressure	no data available
vapour density	no data available
Viscosity	no data available
pH value	7.0

#### 10. Stability and Reactivity

<b>Stability</b>	Stable under normal conditions.
<b>Materials to avoid</b>	No dangerous reaction known under conditions of normal use.
<b>Possibility of hazardous reactions</b>	Hazardous reaction has not been reported
<b>Hazardous decomposition products</b>	None under normal use conditions.
<b>Polymerisation</b>	Hazardous polymerisation does not occur.
<b>Conditions to avoid</b>	None under normal processing.

#### 11. Toxicological Information

##### Acute toxicity

At this time, the limited evidence available suggests caution when potential exposures to nanoparticles may occur. Due to the limited information about health risks from nanomaterials, it is prudent to take steps for minimizing worker exposures. Occupational health risks associated with manufacturing and using nanomaterials are not yet clearly understood. Studies have indicated that low solubility nanoparticles are more toxic than larger particles on a mass for mass basis. There are strong indications that particle surface area and surface chemistry are responsible for observed responses in cell cultures and animals. There are indications that nanoparticles can penetrate through the skin or move from the respiratory system to other organs.

##### Principle Routes of Exposure/

##### Potential Health effects

<b>eyes</b>	May cause eye irritation with susceptible persons.
<b>Skin</b>	May cause skin irritation in susceptible persons.

<b>Inhalation</b>	May be harmful by inhalation.
<b>INGESTION</b>	May be harmful if swallowed. Carcinogenic effects None.
<b>Mutagenic effects</b>	None.
<b>Reproductive toxicity</b>	None.
<b>Sensitisation</b>	None.

12. Ecological Information

<b>Ecotoxicity</b>	Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
<b>Mobility</b>	No information available.
<b>Biodegradation</b>	Inherently biodegradable.
<b>Bioaccumulation</b>	Material does not bioaccumulate.

13. Disposal Considerations

Dispose of contents/containers in accordance with local regulations.

14. Transportation Information

<b>IATA</b>	
<b>Proper Shipping Name</b>	Not classified as dangerous in the meaning of transport regulations.
<b>Hazard Class</b>	None
<b>Subsidiary class</b>	None
<b>Packing group</b>	None
<b>UN-No</b>	None

15. Regulatory Information

16. Other Information

Use as laboratory reagent. Scientific research and development.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"