

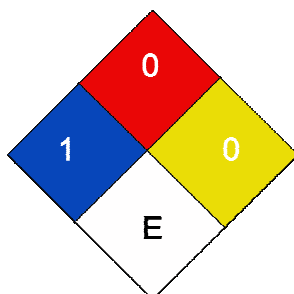
# MATERIAL SAFETY DATA SHEET

## YTTRIUM ALUMINIUM OXIDE NANPOWDER

Stock #: NS6130-12-001736

### 1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name : Yttrium Aluminium Oxide Nanopowder  
Use : Research and Development  
Address : Nanoshel LLC  
3422 Old Capitol Suit 1305  
Willmington DE – 19808  
United States  
  
Emergency : +1.532.253.9878



|                     |   |
|---------------------|---|
| Health              | 1 |
| Fire                | 0 |
| Reactivity          | 0 |
| Personal Protection | E |

### 2. COMPOSITION & INFORMATION ON INGREDIENTS

Chemical Characterisation :  $Y_3Al_5O_{12}$   
Hazardous Ingredients : Nil

### 3. HAZARD IDENTIFICATION

Toxicity : No Data Available  
Eye Contact : Dust may cause irritation

### 4. FIRST AID MEASURES

Skin : Wash skin with soap and copious amounts of water  
  
Eyes : Immediate and prolonged irritation treat with copious amounts of water.  
  
Ingestion : Wash out mouth with water provided person Is Conscious.  
  
Inhalation : If inhaled, remove to fresh air. If not

breathing give artificial respiration. If breathing is difficult, give oxygen

## **5. FIREFIGHTING MEASURES**

|                                 |   |                                                                                                                                               |
|---------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Extinguishing Data              | : | Water Spray                                                                                                                                   |
| Unsuitable Extinguishing Data   | : | Carbon Dioxide, Dry Chemical Powder, Polymer Foam                                                                                             |
| Unusual Firefighting Hazards    | : | Capable of creating a dust explosion                                                                                                          |
| Special Firefighting Procedures | : | Use normal procedures which include wearing self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. |

## **6. ACCIDENTAL RELEASE MEASURES**

|                                |   |                                                                                           |
|--------------------------------|---|-------------------------------------------------------------------------------------------|
| Personal Precautions           | : | Wear respirator, chemical safety goggles, rubber boots and gloves.                        |
| Precautions to the Environment | : | Sweep up, place in a bag and hold for waste disposal.                                     |
| Cleanup Procedures             | : | Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. |

## **7. HANDLING AND STORAGE**

|                              |   |                                                                      |
|------------------------------|---|----------------------------------------------------------------------|
| Handling Precautions         | : | Chemical Safety Goggles. Compatible with Chemical-resistant Gloves   |
| Storage                      | : | Store in a cool dry place.                                           |
| Unusable Packaging Materials | : | Wash thoroughly after handling. Irritating dust, Keep tightly closed |

## **8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

### **Personal Protective Equipment**

|             |   |                                    |
|-------------|---|------------------------------------|
| Respiratory | : | Self-contained breathing apparatus |
| Hand        | : | Chemical-resistant Gloves          |
| Eye         | : | Avoid contact with eyes            |
| Skin        | : | Wash thoroughly after handling     |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

|        |   |        |
|--------|---|--------|
| Form   | : | Powder |
| Colour | : | N/A    |
| Odour  | : | N/A    |

### Safety Related Information

|               |   |         |
|---------------|---|---------|
| FlashPoint    | : | N/A     |
| Boiling Point | : | N/A     |
| Melting Point | : | 2690 °C |
| pH            | : | N/A     |

## 10. STABILITY AND REACTIVITY

|            |   |                           |
|------------|---|---------------------------|
| Stability  | : | Completely Stable         |
| Reactivity | : | Non Reactive/ Non Soluble |

## 11. TOXICOLOGICAL INFORMATION

### Possible Health Effects

|            |   |                    |
|------------|---|--------------------|
| Skin       | : | No effect          |
| Eyes       | : | Irritation         |
| Inhalation | : | No Chocking Hazard |
| Toxicity   | : | Non-Toxic          |

## 12. ECOLOGICAL IMPACT

Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.  
No Negative Ecological Impact, Data not Available

## 13. WASTE DISPOSAL

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator, equipped with an afterburner and scrubber

## 14. TRANSPORT INFORMATION (UN ORNEK OLARAK VERİLMİŞTİR)

|                             |   |                                   |
|-----------------------------|---|-----------------------------------|
| HS Code                     | : | N/A                               |
| CAS                         | : | 12005-21-9                        |
| Proper Shipping Name        | : | Yttrim Aluminium Oxide Nanopowder |
| Air Transport (ICAO & IATA) | : | Speciality Chemical               |
| Class                       | : | Non Hazardeous                    |
| Packing group               | : | Normal Packing                    |
| Transport information       | : | Not regulated for IATA (AIR)      |

## 15. OTHER REGULATORY INFORMATION

Federal and State Regulations: TSCA 8(b) inventory: Yttrium Aluminium Oxide Nanopowder

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada)

DSCL (EEC):

R36- Irritating to eyes

S2- Keep out of the reach of children

S46- If swallowed, seek medical advice immediately & show container or label

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Splash goggles.

## 16. OTHER INFORMATION

**References:** Not available

**Other Special Considerations:** Not available