

Material Safety Data Sheet

acc. to OSHA and ANSI

Dec. 06, 2007

1 Identification of substance:

- Product details:
- Trade name: Aluminum Oxide (gamma) dispersion in 1,2-Propanediol
- Stock number: 7016WJQG
- Manufacturer/Supplier:
Nanostructured & Amorphous Materials, Inc.
16840 Clay Road, Suite #113
Houston, TX 77084, USA

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

1,2-Propanediol (CAS# 57-55-6), ~80wt%
Aluminum Oxide: Al₂O₃, CAS#: 1344-28-1, 20wt%

3 Hazards identification

Emergency Overview

OSHA Hazards

No OSHA Hazards

HMIS Classification

Health Hazard: 0

Flammability: 1

Physical hazards: 0

NFPA Rating

Health Hazard: 0

Fire : 1

Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

4 First aid measures

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

5 Fire fighting measures

Flammable properties

Flash point 103 °C (217 °F) - closed cup

Ignition temperature 415 °C (779 °F)

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6 Accidental release measures

Personal precautions

Avoid breathing vapors, mist or gas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Keep in suitable, closed containers for disposal.

7 Handling and storage

Handling

Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place.

hygroscopic Light sensitive.

8 Exposure controls and personal protection

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

For prolonged or repeated contact use protective gloves.

Eye protection

Safety glasses

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Hygiene measures

General industrial hygiene practice.

9 Physical and chemical properties:

Appearance

Form liquid, clear, viscous

Colour colourless

Safety data

pH no data available

Melting point -60 °C (-76 °F)

Boiling point 185 - 189 °C (365 - 372 °F)

Flash point 103 °C (217 °F) - closed cup

Ignition temperature 415 °C (779 °F)

Lower explosion limit 2.6 %(V)

Upper explosion limit 12.5 %(V)

Vapour pressure 0.11 hPa (0.08 mmHg) at 20 °C (68 °F)

Density 1.036 g/cm³

Water solubility no data available

Vapour density 2.63

- (Air = 1.0)

10 Stability and reactivity

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Exposure to moisture.

Materials to avoid

Acid chlorides, Acid anhydrides, Oxidizing agents, Chloroformates, Reducing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.

Carbon oxides

11 Toxicological information

Acute toxicity

LD50 Oral - rat - 20,000 mg/kg

LD50 Dermal - rabbit - 20,800 mg/kg

Irritation and corrosion

Skin - Human - Mild skin irritation - 7 d

Eyes - rabbit - Mild eye irritation

Sensitisation

no data available

Chronic exposure

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no data available

Signs and Symptoms of Exposure

Gastrointestinal disturbance, Nausea, Headache, Vomiting, Central nervous system depression

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

12 Ecological information:

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

Toxicity to fish mortality NOEC - Pimephales promelas (fathead minnow) - 52,930 mg/l - 96 h

Toxicity to daphnia
and other aquatic
invertebrates. mortality NOEC - Daphnia - 13,020 mg/l - 48 h

EC50 - Daphnia magna (Water flea) - > 10,000 mg/l - 48 h

Further information on ecology

no data available

13 Disposal considerations

Product

Observe all federal, state, and local environmental regulations.

Contaminated packaging

Dispose of as unused product.

14 Transport information**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15 Regulations**OSHA Hazards**

No OSHA Hazards

TSCA Status

On TSCA Inventory

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

No Components Listed

Pennsylvania Right To Know Components

Propane-1,2-diol

CAS-No.

57-55-6

Revision Date

1990-01-01

New Jersey Right To Know Components

Propane-1,2-diol

CAS-No.

57-55-6

Revision Date

1990-01-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement 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 the responsibility of the user.

