Nanopartz Inc.

Safety Data Sheet Version E1

Revision Date 5/10/16

1. PRODUCT AND COMPANY IDENTIFICATION

| Product Name | Gold nanoparticles | |
|-------------------------------|--|-----------------|
| Product Numbers : | A, CC, CI, AC, 10, 11, 12 | |
| Brand : | Nanopartz Inc. | |
| Supplier : | Nanopartz Inc. 146 Barberry Pl. Loveland CO 80537 USA | |
| Telephone : Fax : | +1 844-334-5555 +1 866-811-6266 | |
| Гах . | +1 000-011-0200 | |
| Emergency Phone # (For both s | supplier and manufacturer): | +1 844-334-5555 |
| Preparation Information : | Nanopartz Inc. | |

2. HAZARDS

IDENTIFICATION

Emergency Overview

OSHA Hazards

No known OSHA hazards Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

HMIS Classification

| Health hazard: | 0 |
|-------------------|---|
| Flammability: | 0 |
| Physical hazards: | 0 |
| NFPA Rating | |

| Health hazard: | 0 |
|--------------------|---|
| Fire: | 0 |
| 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. |
| Ingestion | May be harmful if swallowed. |

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Synonyms | : | AU NP, Gold Colloid |
|-----------------------------|---|---------------------|
| Formula Molecular Weight | - | Au 196.97 g/mol |

No ingredients are hazardous according to OSHA criteria.

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. Rine mouth with water.

5. FIREFIGHTING MEASURES

Conditions of flammability Not flammable or combustible.

Suitable extinguishing media

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

Special protective equipment for firefighters Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Avoid breathing vapors, mist or gas.

Environmental precautions

No special environmental precautions required.

Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature 2-8 degC.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

General industrial hygiene practice.

Appearance

| Form | liquid |
|------|--------|
|------|--------|

Safety data

| pH Melting point/freezing poin Boiling point Flash point | 5-9 nt 0 degC 100 degC no data available |
|---|---|
| Ignition temperature | none |
| Autoignition temperature | no data available |
| Lower explosion limit | no data available |
| Upper explosion limit | no data available |
| Vapour pressure | no data available |
| Density 1 | g/cm3 |
| Water solubility | no data available |
| Relative vapour density | no data available |
| Odour | no data available |
| Odour Threshold | no data available |
| Evaporation Rate | no data available |

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid no data available

Materials to avoid no data available

Hazardous decomposition products None

11. TOXICOLOGICAL

INFORMATION Acute toxicity

Oral LD50 no data available

Inhalation LC50 no data available

Dermal LD50 no data available

Skin corrosion/irritation no data available

Serious eye damage/eye irritation

Eyes: no data available

Respiratory or skin sensitization no data available

Germ cell mutagenicity

no data available

Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System) no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System) no data available

Aspiration hazard

no data available

Potential health effects

| Inhalation | May be harmful if inhaled. May cause respiratory tract irritation. |
|------------|---|
| Ingestion | May be harmful if swallowed. |
| Skin | May be harmful if absorbed through skin. May cause skin irritation. |
| Eyes | May cause eye irritation. |

Synergistic effects no data available

Additional Information RTECS: Not available

12. ECOLOGICAL

INFORMATION Toxicity

no data available

Persistence and degradability no data available

Bioaccumulative potential no data available

no data avaliable

Mobility in soil no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of unused product.

14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods

IMDG Not dangerous goods

IATA Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards No known OSHA hazards

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

California Prop. 65 Components

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