SAFETY DATA SHEET

Version 3.1 Revision Date 08/21/2016

| 1 Droduct identific to | |
|--|--|
| .1 Product identifiers Product name | ² Azide PEG Thiol, Azide PEG SH, Thiol PEG Azide, N3-PEG-SH |
| Product Number Brand | : PG2-AZTH-400, 600,1k, 2k, 3k, 5k, 10k, 20k : Nanocs |
| 2 Relevant identified use | s of the substance or mixture and uses advised against |
| Identified uses | : Laboratory chemicals, Manufacture of substances |
| .3 Details of the supplier of | of the safety data sheet |
| Company | : Nanocs Inc. P. O. Box 130024 Boston, MA 02113 USA |
| Telephone Fax | : +1 800-388-4221 : +1 917-591-2212 |
| .4 Emergency telephone r | number |
| Emergency Phone # | : +1-917-400-4863 |

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | | Classification | Concentration |
|--------------------------------|--------------------------|----------------|---------------|
| PEG | | | |
| CAS-No. EC-No. Index-No. | 25322-68-3 n/a n/a | | |

No ingredients are hazardous according to OSHA criteria. No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

4.1 Description of 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.

- **4.2** Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture Carbon oxides

5.3 Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information No data available

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures Avoid breathing vapours, mist or gas. For personal protection see section 8.
- 6.2 Environmental precautions Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections For disposal see section 13.

7. HANDLING AND STORAGE

- **7.1 Precautions for safe handling** For precautions see section 2.2.
- **7.2** Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place. Store at -20 ^oC. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls General industrial hygiene practice.

Personal protective equipment

Eye/face protection

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

Skin 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.

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.

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).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| a) | Appearance | Form: Crystalline solid or semi-solid |
|----|--|---------------------------------------|
| b) | Odour | No data available |
| c) | Odour Threshold | No data available |
| d) | рН | No data available |
| e) | Melting point/freezing point | No data available |
| f) | Initial boiling point and boiling range | No data available |
| g) | Flash point | Not applicable |
| h) | Evaporation rate | No data available |
| i) | Flammability (solid, gas) | No data available |
| j) | Upper/lower flammability or explosive limits | No data available |
| k) | Vapour pressure | No data available |
| I) | Vapour density | No data available |
| m) | Relative density | No data available |
| n) | Water solubility | No data available |
| o) | Partition coefficient: n- octanol/water | No data available |
| p) | Auto-ignition temperature | No data available |
| q) | Decomposition temperature | No data available |
| r) | Viscosity | No data available |
| s) | Explosive properties | No data available |
| t) | Oxidizing properties | No data available |

10. STABILITY AND REACTIVITY

10.1 Reactivity No data available

10.2 Chemical stability Stable under recommended storage conditions.

- Possibility of hazardous reactions 10.3 No data available
- 10.4 Conditions to avoid No data available
- 10.5 Incompatible materials Strong oxidizing agents
- 10.6 Hazardous decomposition products Other decomposition products - No data available In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation 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.
- No component of this product present at levels greater than or equal to 0.1% is identified as a NTP: known or anticipated carcinogen by NTP.
- No component of this product present at levels greater than or equal to 0.1% is identified as a OSHA: carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

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

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. The following components are subject to reporting levels established by SARA Title III, Section 302:

SARA 313 Components

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

PEG

Massachusetts Right To Know Components

| CAS-No. | |
|------------|--|
| 25322-68-3 | |

Revision Date 2007-07-01

Pennsylvania Right To Know Components

| PEG | CAS-No. 25322-68-3 | Revision Date |
|-----|-----------------------|---------------|
| | - | |
| | | |

New Jersey Right To Know Components

PEG

CAS-No. 25322-68-3 **Revision Date**

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.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

| Acute Tox. | Acute toxicity |
|-----------------|---|
| Aquatic Acute | Acute aquatic toxicity |
| Aquatic Chronic | Chronic aquatic toxicity |
| H300 + H310 | Fatal if swallowed or in contact with skin |
| H410 | Very toxic to aquatic life with long lasting effects. |

HMIS Rating

| Health hazard: | 0 |
|--------------------------------------|--------|
| Chronic Health Hazard: | * |
| Flammability: | 0 |
| Physical Hazard | 0 |
| | |
| NFPA Rating | |
| NFPA Rating Health hazard: | 0 |
| • | 0 0 |

Further information

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Preparation Information

Nanocs Corporation Product Safety – Global 1-800-388-4221

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