

**Material Safety Data Sheet**  
Version No.: 2.0(Rev. date : 2020-07-09)

# Thiol Magnetic Nanobeads

---

## 1. Product and company identification

---

1.1. Product name : Thiol Magnetic Nanobeads

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemical, Manufacture of substance

1.3. Detail of the supplier of the safety data sheet

Company : Bioneer Corporation

Address : 8-11, Munpyeongseoro, Daedeok-Gu, Daejeon 34302, Republic of Korea

Emergency telephone number : +82-42-930-8591

---

## 2. Hazards identification

---

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture

2.2. Label elements

Pictogram : none

Signal word : none

Hazard statement : none

Precautionary statements : none

Supplemental Hazard Statement : none

2.3. Other hazard (NFPA)

Health = 1

Flammability = 0

Reactivity = 0

---

## 3. Composition/information on ingredients

---

---

3.1. Substances : Thiol Magnetic Nanobeads

3.2. CAS No. : –

3.3. Component Classification Concentration

Iron Oxide (CAS Number: 1317-61-9); approximately 90%

Silica (CAS Number: 7631-86-9); approximately 10%

Thiol Surface Modified Material (CAS Number: N/A); less than 1%

---

#### 4. First aid measures

---

4.1. In case of eye contact

Flash eyes with water as a precaution

4.2. In case of skin contact

Wash off with soap and plenty of water

4.3. If inhaled

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

4.4. If swallowed

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

4.5. Most important symptom and effects, Both acute and delayed : no data available

4.6. Indication of any immediate medical attention and special treatment needed : no data available

---

#### 5. Fire-fighting 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 : no data available

5.3. Advice for fire fighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4. Further information : no data available

---

#### 6. Accidental release measures

---

6.1. Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

6.2. Environmental precautions

Do not let product enter drain.

---

---

### 6.3. Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal

---

## 7. Handling and storage

---

### 7.1. Precautions for safe handling

Normal measures for preventive fire protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilation place.

---

## 8. Exposure controls / personal protection

---

### 8.1. Control parameters

Components with workplace control parameters.

### 8.2. Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

### 8.3. Personal protective equipments

– Respiratory protection : Use suitable respirator

– Eye/face protection

Use equipment for eye protection tested and approved

– Skin protection

Handle with gloves. Gloves must be inspected prior to use

– Body protection

Use a Impervious clothing

Choose body protection in relation to its type, to the concentration and amount of dangerous substances,  
and to the specific work-place.

---

## 9. Physical and chemical properties

---

9.1. Appearance Form : black power

9.2. Odor : no data available

9.3. Odor threshold : no data available

9.4. pH : no data available

9.5. Melting point/freezing point : 1565°C (Iron Oxide), 1600°C (Silica)

---

---

9.6. initial boiling point : no data available (Iron Oxide), 2230°C(Silica)

9.7. Flash point : no data available

9.8. Evaporation rate : no date available

9.9. Flammability(solid, gas) : no date available

9.10. Upper/lower flammability or explosive limits : no date available

9.11. Vapor pressure : no date available

9.12. Vapor density : no date available

9.13. Relative density : no data available

9.14. Water solubility : insoluble

9.15. Partition coefficient (n-octane/water) : no date available

9.16. Auto-ignition temperature : no date available

9.17. Decomposition temperature : no date available

9.18. Viscosity : no date available

9.19. Explosive properties : no date available

9.20. Oxidizing properties : no date available

---

## 10. Stability and Reactivity

---

10.1. Reactivity : no data available

10.2. Chemical stability : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions : no date available

10.4. Condition to avoid : Strong Acids

10.5. Incompatible materials : no data available

10.6. Hazardous decomposition products : no date available

---

## 11. Toxicological information

---

11.1. Information on toxicological effects

– Acute toxicity : no date available

– Skin corrosion/irritation : no date available

– Serious eye damage/eye irritation : no date available

– Respiratory or skin sensitization : no date available

– Germ cell mutagenicity : no date available

---

- 
- Carcinogenicity : no data available
  - Reproductive toxicity : 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
  - 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 skin irritation.
    - Eyes : May cause eye irritation.
  - Additional Information
    - RTECS : Not available
- 

## 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. 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

---

### 14.1. UN number

ADR/RID : –      IMDG : –      IATA : –

### 14.2. UN proper shipping name

ADR/RID : Not dangerous goods      IMDG : : Not dangerous goods      IATA : : Not dangerous goods

---

---

14.3. Transport hazard class

ADR/RID : –      IMDG : –      IATA : –

14.4. Packaging group

ADR/RID : –      IMDG : –      IATA : –

14.5. Environmental hazards

ADR/RID : no      IMDG Marine pollutant : no      IATA : no

14.6. Special precautions for user : no data available

---

15. Regulatory information

---

15.1. Safety, health and environment regulations/legislation specific for the substance or mixture : no data available

15.2. Chemical Safety Assessment : no data available

---

16. Other information

---

16.1. References

16.2. Initial Creation Date : 2008-05-20

16.3. Version No. / Revision Date : 2.0/ 2020-07-09

16.4. Further information

Bioneer Corporation makes no warranty or representation to its completeness, accuracy or currency. This material is intended for use by persons with pertinent technical skills and at their discretion and risk. It is the responsibility of the user to determine the product's suitability for its intended use, the product's safe use, and the product's proper disposal. Disposal of hazardous material may be subject to federal, state or local laws or regulations.

---