

Material Safety Data Sheet

Version No.: 4.0(Rev. date : 2023-02-21)

Carboxyl(COOH) Magnetic Nanobeads

1. Product and company identification

1.1. Product name : Carboxyl(COOH) 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 : Carboxyl(COOH) 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%

Carboxyl 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 : Iron Oxides

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 data available

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

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

9.11. Vapor pressure : no data available

9.12. Vapor density : no data available

9.13. Relative density : no data available

9.14. Water solubility : insoluble

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

9.16. Auto-ignition temperature : no data available

9.17. Decomposition temperature : no data available

9.18. Viscosity : no data available

9.19. Explosive properties : no data available

9.20. Oxidizing properties : no data 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 data available

10.4. Condition to avoid : no data available

10.5. Incompatible materials : Strong oxidizing agents

10.6. Hazardous decomposition products : no data available

11. Toxicological information

11.1. Information on toxicological effects

– Acute toxicity : no data available

– Skin corrosion/irritation : no data available

– Serious eye damage/eye irritation : no data available

– Respiratory or skin sensitization : no data available

– Germ cell mutagenicity : no data available

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- 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
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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
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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.
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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
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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. Regulation under the Occupational Safety and Health Act

- Harmful Substances Required Permission for Manufacture : Not relevant
- Harmful Substances Prohibited from Manufacturing : Not relevant
- Carcinogenic Substances : Not relevant
- Controlled Substances Subject to Environment Monitoring : Iron Oxide (CAS Number: 1317-61-9)
- Controlled Substances Subject to Health Examination : Iron Oxide (CAS Number: 1317-61-9)
- Hazardous substances requiring management : Iron Oxide (CAS Number: 1317-61-9)

15.2 Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

- Toxic Chemicals : Not relevant
- Observational chemicals : Not relevant
- Restricted Chemicals : Not relevant
- Prohibited Chemicals : Not relevant

15.3 Dangerous Substances Safety Management Act

- Not Applicable to Dangerous Materials.

15.4. Waste Control Act

- Follow article 13 of the act to dispose the product waste

15.5 Other regulations

- No data
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16. Other information

16.1. References

16.2. Initial Creation Date : 2008-05-20

16.3. Version No. / Revision Date : 4.0/ 2023-02-21

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.
