SAFETY DATA SHEET

MA(PEG)ₙ

Section 1. Identification

GHS product identifier : MA(PEG)ₙ
Other means of identification : MA(PEG)₈; MA(PEG)₁₂; MA(PEG)₂₄
Product type : Solid.
Product code : 0026112 0026113 0026114 0026115 0026116 0026117
SDS # : 7940
Chemical formula : Not available.
CAS # : Not available.

Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Supplier's details : Thermo Fisher Scientific
Pierce Biotechnology
P.O. Box 117
Rockford, IL 61105
United States
815.968.0747 or
800.874.3723
7 AM - 5 PM Central Time (GMT -06:00)

Emergency telephone number (with hours of operation) : CHEMTREC: 800.424.9300
Outside US: 703.527.3887

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.
Hazard statements : No known significant effects or critical hazards.
Precautionary statements

Prevention : Not applicable.
Response : Not applicable.
Storage : Not applicable.
Disposal : Not applicable.
Hazard not otherwise classified : None known.

Section 3. Composition/information on ingredients

Other means of identification : MA(PEG)₈; MA(PEG)₁₂; MA(PEG)₂₄

CAS number/other identifiers

CAS number : Not available.

Date of issue/Date of revision : 12/6/2013.
Date of previous issue : No previous validation.
Version : 1.
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA(PEG)-</td>
<td>98 - 100</td>
<td>-</td>
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</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

**Description of necessary first aid measures**

- **Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

- **Inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

- **Skin contact**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

- **Ingestion**: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**

- **Potential acute health effects**
  - **Eye contact**: No known significant effects or critical hazards.
  - **Inhalation**: No known significant effects or critical hazards.
  - **Skin contact**: No known significant effects or critical hazards.
  - **Ingestion**: No known significant effects or critical hazards.

- **Over-exposure signs/symptoms**
  - **Eye contact**: No specific data.
  - **Inhalation**: No specific data.
  - **Skin contact**: No specific data.
  - **Ingestion**: No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

- **Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

- **Specific treatments**: No specific treatment.

- **Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Extinguishing media**

- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.

- **Unsuitable extinguishing media**: None known.

- **Specific hazards arising from the chemical**: No specific fire or explosion hazard.

- **Hazardous thermal decomposition products**: No specific data.
Section 5. Fire-fighting measures

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Section 8. Exposure controls/personal protection

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state: Solid.
Color: Not available.
Odor: Not available.
Odor threshold: Not available.
pH: Not available.
Melting point: Not available.
Boiling point: Not available.
Flash point: Not available.
Burning time: Not available.
Burning rate: Not available.
Evaporation rate: Not available.
Flammability (solid, gas): Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.

Lower and upper explosive (flammable) limits: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Relative density: Not available.
Solubility: Soluble in the following materials: cold water and hot water.
Solubility in water: Not available.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
SADT: Not available.
Viscosity: Not available.
Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Conclusion/Summary : To the best of our knowledge, the toxicological properties of this substance have not been thoroughly investigated.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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Section 11. Toxicological information

**Eye contact** : No specific data.
**Inhalation** : No specific data.
**Skin contact** : No specific data.
**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- **Potential immediate effects** : Not available.
- **Potential delayed effects** : Not available.

#### Long term exposure

- **Potential immediate effects** : Not available.
- **Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

- **General** : No known significant effects or critical hazards.
- **Carcinogenicity** : No known significant effects or critical hazards.
- **Mutagenicity** : No known significant effects or critical hazards.
- **Teratogenicity** : No known significant effects or critical hazards.
- **Developmental effects** : No known significant effects or critical hazards.
- **Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

- **Acute toxicity estimates**
  - Not available.

Section 12. Ecological information

### Toxicity

- Not available.

### Persistence and degradability

- Not available.

### Bioaccumulative potential

- Not available.

### Mobility in soil

- **Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

### Other adverse effects

- No known significant effects or critical hazards.
Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

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<tr>
<th>DOT Classification</th>
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<tr>
<td>UN number</td>
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<tr>
<td>UN proper shipping name</td>
<td>-</td>
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<tr>
<td>Transport hazard class(es)</td>
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<tr>
<td>Packing group</td>
<td>-</td>
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<tr>
<td>Environmental hazards</td>
<td>No.</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
</tr>
</tbody>
</table>

Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

Section 15. Regulatory information

U.S. Federal regulations: TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): Not determined.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed
Clean Air Act Section 602 Class I Substances: Not listed
Clean Air Act Section 602 Class II Substances: Not listed
DEA List I Chemicals (Precursor Chemicals): Not listed
DEA List II Chemicals (Essential Chemicals): Not listed
SARA 302/304

Composition/information on ingredients: No products were found.
Section 15. Regulatory information

SARA 304 RQ : Not applicable.
SARA 311/312 Classification : Not applicable.

Composition/information on ingredients
No products were found.

State regulations
Massachusetts : This material is not listed.
New York : This material is not listed.
New Jersey : This material is not listed.
Pennsylvania : This material is not listed.

Canada inventory : Not determined.

International regulations
International lists : Australia inventory (AICS): Not determined.
China inventory (IECSC): Not determined.
Japan inventory: Not determined.
Korea inventory: Not determined.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed
Chemical Weapons Convention List Schedule II Chemicals : Not listed
Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)
Health 0
Chronic Health Hazard 0
Flammability 0
Physical hazards 0

National Fire Protection Association (U.S.A.)
Health 0
Flammability 0
Instability/Reactivity 0
Special

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

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Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History
Date of printing : 12/10/2013.
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Date of previous issue : No previous validation.
Version : 1
Prepared by : SDS Specialist

Key to abbreviations
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.