Material Safety Data Sheet
Version No.: 1.0(Revision Date : 2013-04-26)

Master mix

1. PRODUCT AND COMPANY IDENTIFICATION

A. Product name : Master mix
B. Recommended use : Research use only
C. Supplier : Bioneer corporation
   ○ Address : 8–11, Munpyeongseoro, Daedeok–gu, Daejeon 306–220 Republic of Korea
   ○ Telephone : +82–42–930–8777

2. HAZARDS IDENTIFICATION

A. Emergency Overview
   Harmful if swallowed

B. GHS Label elements, including precautionary statements
   ○ Pictogram

   ○ Signal word : Warning
   ○ Hazard statement(s) :
     H302 Harmful if swallowed

   ○ Precautionary statements :
     Prevention :
     P264 : Wash thoroughly after handling.
     P270 : Do not eat, drink or smoke when using this product
Response:

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330: Rinse mouth

Storage:

No information available.

Disposal:

P501: Dispose of contents/container to ...

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS번호 또는 식별번호</th>
<th>함유량(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4-(2-HYDROXYETHYL)-1-PIPERAZINE ETH</td>
<td>7365-45-9</td>
<td>1%~10%</td>
</tr>
<tr>
<td>S1~S31</td>
<td>Trade secrets</td>
<td>98%~85%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

A. Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at few minutes. Remove contact lenses. If symptoms persist, call a physician.

B. Skin Contact: If skin problems occur, discontinue use. If skin irritation persists, call a physician. May cause an allergic skin reaction.

C. Inhalation: Immediately call a doctor/physician.

D. Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

E. Most important symptoms/effects, acute and delayed: None known.

F. Notes to Physician: May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

A. Suitable extinguishing media: Dry chemical, CO₂, water spray or alcohol-resistant foam

B. Special Hazard: Emits toxic fumes under fire conditions.

C. Special protective equipment for fire-fighters: As in any fire, wear self-contained breathing apparatus and full protective gear

6. ACCIDENTAL RELEASE MEASURES
A. Personal precautions : Use personal protective equipment. Avoid contact with skin, eyes and clothing.

B. Environmental precautions : Should not be released into the environment.

C. Methods for cleaning up : No information available.

7. HANDLING AND STORAGE

A. Advice on safe handling : Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

B. Storage condition : Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure Guidelines : Not applicable.


C. Personal Protective Equipment
   ○ Eye protection : No special protective equipment required.
   ○ Hand protection : Impervious gloves.
   ○ Skin and body protection : No special protective equipment required.

9. PHYSICAL AND CHEMICAL PROPERTIES

   Physical state : No information available
   pH : No information available
   Melting/freezing point : No information available
   Boiling point/boiling range : No information available
   Flash point : No information available
   Evaporation rate : No information available
   Flammability (solid, gas) : No information available
   Flammability Limits in Air (Upper/Lower) : No information available
   Vapor pressure : No information available
   Vapor Density : No information available
   Relative Density : No information available
   Water solubility : No information available
   Solubility in other solvents : No information available
   Partition coefficient 'n-octanol/water : No information available
   Autoignition temperature : No information available
   Decomposition temperature : No information available
Viscosity of product : No information available
Molecular weight : No information available

10. STABILITY AND REACTIVITY

A. Stability : Stable under normal conditions.
B. Hazardous reactions : No information available
C. Conditions to avoid : Combustible materials, Reducing materials
D. Materials to avoid : Ignition sources
E. Hazardous decomposition products : Causticity/toxic hue, toxic gas

11. TOXICOLOGICAL INFORMATION

- Principle Routes of Exposure : Skin Contact, Eye Contact, Inhalation.
  - Inhalation : Irritating to respiratory system.
  - Skin Contact : Irritating to skin.
  - Ingestion : Harmful if swallowed.
  - Eye Contact : Irritating to eyes.

12. ECOLOGICAL INFORMATION

A. Acute Toxicity : No information available
B. Persistence and degradability : No information available.
C. Bioaccumulative potential : No information available.
D. Mobility : No information available
E. Other adverse effects : No information available

13. DISPOSAL CONSIDERATIONS

A. Waste from Residues / Unused Products : Dispose of in accordance with local regulations.
B. Contaminated packaging : Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

A. UN/ID no : No information available
B. Proper shipping name : No information available
C. Hazard Class : No information available
D. Packing group : No information available
E. Description : No information available
F. Emergency Response Guide Number : No information available

15. REGULATORY INFORMATION

A. Occupational health and safety act : No information available
B. TCCA regulations : No information available
C. Dangerous goods safety management act : No information available
D. Waste management regulation : No information available
E. International regulations : No information available

16. OTHER INFORMATION

A. Issuing date : 26–April–2013
B. Revision date : 26–April–2013
C. Disclaimer
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BIONEER corporation shall not be held liable for any damage resulting from handling or from contact with the above product.