



RT-PCR Quick Master Mix  
 First issue : May. 26, 2015  
 Revised: Dec 13, 2018  
 SDS No. 1071F

## Safety Data Sheet

### 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name **RT-PCR Quick Master Mix**  
 Product Code **PCR-311F**  
 SUPPLIER  
 Name **TOYOBO Co., Ltd.**  
 Address **2-8 Dojima Hama 2-chome, Kita-Ku OSAKA 530-8230 JAPAN**  
 Department **Life Science Department**  
 Emergency Telephone No. **+81-6-6348-3786**  
 Fax No. **+81-6-6348-3833**  
 Recommended use and restrictions on use **Master mix for RT-PCR (Reagents for research)**

### 2 HAZARDS IDENTIFICATION

|                         |   |                             |                             |
|-------------------------|---|-----------------------------|-----------------------------|
| Most Important Hazards  | 2x RT-PCR Quick Master Mix contain glycerol and may cause eye and skin irritation.  |                             |                             |
| Specific Hazard         | Not available   |                             |                             |
| GHS Classification      | Hazard class and category   |                             |                             |
| Physical Hazards        | Flammable liquids   | 2xRT-PCR Quick Master Mix   | Manganese(II) acetate       |
| Health Hazards          | Skin corrosion /Irritation  | Not classified              | Not classified              |
|                         |   | Category 3                  | Classification not possible |
|                         | Serious eye damage /Eye irritation  | Category 2B                 | Classification not possible |
| Environmental Hazards   |   | Classification not possible | Classification not possible |
| Physical Hazards        | Flammable liquids   | PositiveControl             | Control Primer F            |
| Health Hazards          | Skin corrosion /Irritation  | Not classified              | Not classified              |
|                         |   | Classification not possible | Classification not possible |
|                         | Serious eye damage /Eye irritation  | Classification not possible | Classification not possible |
| Environmental Hazards   |   | Classification not possible | Classification not possible |
| Physical Hazards        | Flammable liquids   | Control Primer R            |                             |
| Health Hazards          | Skin corrosion /Irritation  | Not classified              |                             |
|                         |   | Classification not possible |                             |
|                         | Serious eye damage /Eye irritation  | Classification not possible |                             |
| Environmental Hazards   |   | Classification not possible |                             |
| Label elements          | 2xRT-PCR Quick Master Mix   |                             |                             |
| Pictogram or symbol     | -   |                             |                             |
| Signal word             | Warning   |                             |                             |
| Hazard statement        | Causes mild skin irritation   |                             |                             |
|                         | Causes eye irritation   |                             |                             |
| Precautionary statement |   |                             |                             |
| Prevention              | Wash hands thoroughly after handling  |                             |                             |
| Response                | If skin irritation occurs: Get medical advice/attention.<br>IF IN EYES: Rinse cautiously with water for several minutes.<br>Remove contact lenses if present and easy to do. Continue rinsing.<br>If eye irritation persists: Get medical advice/attention. |                             |                             |



RT-PCR Quick Master Mix  
 First issue : May. 26, 2015  
 Revised: Dec 13, 2018  
 SDS No. 1071F

## Safety Data Sheet

### 3 COMPOSITION / INFORMATION ON INGREDIENTS

|   |  |                                       |  |
|---|--|---------------------------------------|--|
| Chemical Product                          | Mixture                                    |                                       |  |
| Chemical Nature                           | Aqueous solution                           |                                       |  |
| Parts Name                                | Main Component                             | CAS No.                               |  |
| <2x RT-PCR Quick Master Mix>              | N,N-Bis(2-hydroxyethyl)glycine             | 150-25-4                              |  |
|   | Potassium acetate                          | 127-08-2                              |  |
|   | 2'-Deoxyadenosine 5'-triphosphate          | 1927-31-7                             |  |
|   | 2'-Deoxycytidine 5'-triphosphate           | 102783-51-7                           |  |
|   | 2'-Deoxyguanosine 5'-triphosphate          | 93919-41-6                            |  |
|   | Thymidine 5' -triphosphate                 | 18423-43-3                            |  |
|   | Bovine Serum Albumin                       | -                                     |  |
|   | Immunoglobulin                             | -                                     |  |
|   | DNA polymerase                             | -                                     |  |
|   | Glycerol                                   | 56-81-5                               |  |
|   | Polyethylene glycol tert-octylphenyl ether | 9002-93-1                             |  |
| <50mM Mn(OAc) <sub>2</sub> >              | Manganese(II) acetate                      | 638-38-1                              |  |
| <RNase Free Water>                        | Water                                      | 7732-18-5                             |  |
| Components Contributing to the Hazard     |  |                                       |  |
| Common Chemical Name<br>(or Generic Name) | Glycerol                                   | Manganese(II)<br>acetate              | Polyethylene glycol<br>tert-octylphenyl<br>ether   |
| Synonyms                                  | Glycerin                                   |                                       | Triton X-100   |
| Chemical formula                          | CH <sub>2</sub> OHCHOHCH <sub>2</sub> OH   | (CH <sub>3</sub> COO) <sub>2</sub> Mn | C <sub>8</sub> H <sub>17</sub> -C <sub>6</sub> H <sub>4</sub> O-<br>(C <sub>2</sub> H <sub>4</sub> O) <sub>n</sub> H |
| CAS No.                                   | 56-81-5                                    | 638-38-0                              | 9002-93-1  |
| Concentration                             | <20%                                       | 0.9%(As for<br>Mn<0.3%)               | <0.02%   |

### 4 FIRST-AID MEASURES

|              |   |
|--------------|---|
| Inhalation   | In case of irritation by inhaling this product, move affected person to fresh air.  |
| Skin Contact | Wash with plenty of clean water, immediately.   |
| Eye Contact  | Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Ingestion    | Try to get the affected person to vomit as much as possible. Seek medical attention, immediately.   |

### 5 FIRE-FIGHTING MEASURES

|                             |   |
|-----------------------------|---|
| Extinguishing Media         | Water, Carbon Dioxide, Foam, Dry Chemical Powder  |
| Protection of fire-fighters | Fire-fighting should be done from the windward side of fire area.<br>Fire-fighters should wear proper protective equipment in case of large scale fire. |

### 6 ACCIDENTAL RELEASE MEASURES

|                           |   |
|---------------------------|---|
| Personal Precautions      | Wear protective equipments and avoid eye/skin contact and inhalation.   |
| Environmental Precautions | Avoid disposition to the environment.   |
| Methods for Cleaning up   | Use cloth, paper, or anything similar to soak up to the solution leaking out of the container. Take up under vacuum using dust collecting filter. |



RT-PCR Quick Master Mix  
 First issue : May. 26, 2015  
 Revised: Dec 13, 2018  
 SDS No. 1071F

## Safety Data Sheet

### 7 HANDLING AND STORAGE

#### HANDLING

|                      |   |
|----------------------|---|
| Technical Measures   | Wear protective equipments and avoid contact with eyes and skin.<br>Handle with ventilation and local exhaust system. |
| Precautions          | Avoid substance contact. After handling, wash hands completely.   |
| Safe Handling Advice | Keep the handling area always clean.  |

#### STORAGE

|                           |  |
|---------------------------|--|
| Proper Storage Conditions | Keep tightly closed and store at below -20°C |
| Packaging Materials       | Store in the original package                |

### 8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

#### ENGINEERING

Set up good ventilation and exhaust system in the work area.

#### Control Parameter

| Limit Values | Glycerol (mist)   | Manganese(II)<br>acetate<br>tetrahydrate | Polyethylene glycol<br>tert-octylphenyl<br>ether |
|--------------|---|--|--|
| JSOH OEL     | not established   | 0.3mg/m <sup>3</sup>                     | not established                                  |
| ACGIH TLV    | 10mg/m <sup>3</sup>   | 0.2mg/m <sup>3</sup>                     | not established                                  |
| OSHA PEL     | total dust:<br>15mg/m <sup>3</sup> TWA<br>respirable fr.:<br>5mg/m <sup>3</sup> TWA | not established                          | not established                                  |

#### PERSONAL PROTECTIVE EQUIPMENT

|                          |  |
|--------------------------|--|
| Respiratory Protection   | Wear a dust mask when needed.                          |
| Hand Protection          | Wear chemical safety gloves.                           |
| Eye Protection           | Wear protective eyeglasses or chemical safety goggles. |
| Skin and Body Protection | Wear lab coat when needed.                             |

### 9 PHYSICAL AND CHEMICAL PROPERTIES

|                 |   |
|-----------------|---|
| Physical State  | Liquid. Lysis Solution, Stop Solution, and Nuclease-free Water freeze at -20°C. |
| Colour          | Colourless  |
| Odour           | None  |
| pH              | 6.0-9.0   |
| Flash Point     | No flammability due to aqueous solution   |
| Explosion limit | Not explosible  |
| Density         | 1.0~1.2(g/cm <sup>3</sup> )   |
| Solubility      | Soluble in water  |

### 10 STABILITY AND REACTIVITY

|  |   |
|--|---|
| Stability                              | Stable at below -20°C.  |
| Possible Hazardous Conditions to Avoid | Nothing particular<br>High temperature, ignition sources, direct sunlight |
| Material to Avoid                      | Strong oxidizer, strong reducers  |
| Hazardous Decomposition                | Not available   |



RT-PCR Quick Master Mix  
 First issue : May. 26, 2015  
 Revised: Dec 13, 2018  
 SDS No. 1071F

## Safety Data Sheet

### 11 TOXICOLOGICAL INFORMATION

|  |   |  |  |
|--|---|--|--|
| Acute Toxicity   | Not Available                               |  |  |
| Local Effects  | May cause eye and skin irritation.          |  |  |
| Toxicological information on the component of this product |   |  |  |
|  | Glycerol                                    | Manganese(II)<br>acetate<br>tetrahydrate | Polyethylene glycol<br>tert-octylphenyl<br>ether   |
| Acute toxicity (LD50)                                      | Oral-mouse: 4090mg/kg<br>Oral-rat: 12.6g/kg | Oral-rat: 3730mg/kg                      | Oral-rat: 1800mg/kg  |
| Skin corrosion/Irritation                                  | rabbit:500mg/24hr:Mild                      | -  | -  |
| Serious eye damage/Eye<br>irritation                       | rabbit:500mg/24hr:Mild                      | -  | rabbit: Moderate<br>irritation (Result of<br>Hazard Assessment<br>Report 2001-<br>42(2002) conducted<br>by Chemical<br>Evaluation and<br>Research Institute in<br>Japan) |

### 12 ECOLOGICAL INFORMATION

|  |   |
|--|---|
| Ecotoxicological information on the components of this product |   |
|  | Poly(oxyethylene) octylphenyl ether   |
| Persistence/Degradability                                      | Not available   |
| Bioaccumulation  | Not available   |
| Mobility   | Soluble in water and diffusible into water environment.   |
| Acute aquatic toxicity<br>(LC50)                               | Algae (Selenastrum)-0.21mg/l-96h (Result of Hazard Assessment<br>Report conducted by Ministry of the Environment and Chemical<br>Evaluation and Research Institute in Japan-2006) |

### 13 DISPOSAL CONSIDERATIONS

|                        |   |
|------------------------|---|
| Waste from Residues    | Dispose of in accordance with all applicable local and national laws and regulations. |
| Contaminated Packaging | Dispose of in accordance with all applicable local and national laws and regulations. |

### 14 TRANSPORT INFORMATION

|                           |  |
|---------------------------|--|
| International Regulations |  |
| UN Classification Number  | Not classified   |
|                           | Follow all of the laws and regulations in your respective country. |
| Specific Precautions      | To prevent packages from breaking, handle with care.               |

### 15 REGULATORY INFORMATION

Follow all of the laws and regulations in your country.

### 16 OTHER INFORMATION

|        |  |
|--------|--|
| Notice | The information in this SDS, to the best of our knowledge, is accurate and correct. However, TOYOBO makes no warranty and assumes no liability whatsoever in connection with any use of this information. The SDS is subject to revision as new information becomes available. |
|--------|--|