1. IDENTIFICATION

Product Identifier

Product Name 5X PrimeScript™ RT Master Mix

Other means of identification

Product Code SD2191
Synonyms No information available

Recommended use of the chemical and restrictions on use.

Identified uses For research use only. Not for use in diagnostic procedures.
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier USA:
Takara Bio USA, Inc.
1290 Terra Bella Avenue
Mountain View, CA 94043
Phone: 800.662.2566/888.251.6618
Web: www.clontech.com

Emergency telephone number

In case of emergency, call PERS (Professional Emergency Resource Services)
1-800-633-8253 (US) or 801-629-0667 (international).

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Clear, colorless solution  Physical State Liquid  Odor Unpleasant

Precautionary Statements - Prevention
Not applicable

Precautionary Statements - Response
Not applicable.

Precautionary Statements - Storage
Not applicable.
Precautionary Statements - Disposal
Not applicable.

Hazards not otherwise classified (HNOC)
Not applicable

Other information
May be harmful if swallowed.

68.00791% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance / Mixture**
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice**
In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact**
Wash off immediately with plenty of water for at least 15 minutes.

**Inhalation**
Move to fresh air.

**Ingestion**
Never give anything by mouth to an unconscious person, If symptoms persist, call a physician, Not an expected route of exposure

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

**Main Symptoms**
No information available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician**
Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**
Decomposition by contact with water may generate vapors which can be ignited by heat or open flame.

**Specific hazards arising from the chemical**
No information available.

**Explosion Data**

- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Ensure adequate ventilation.

Environmental precautions
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions
Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 56-81-5</td>
<td>-</td>
<td>TWA: 15 mg/m³</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 5 mg/m³ (vacated) TWA: 10 mg/m³ (vacated)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>Ceiling: 100 mg/m³</td>
<td>(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Safety glasses with side-shields.

Skin and body protection
Wear suitable protective clothing. Protective shoes or boots.
Respiratory protection None required under normal usage.

Hygiene measures When using, do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless solution</td>
</tr>
<tr>
<td>Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Unpleasant</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>Physical State</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
<td>No information available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>No information available</td>
</tr>
<tr>
<td>Density VALUE</td>
<td>No information available</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>No information available</td>
</tr>
</tbody>
</table>

#### 10. STABILITY AND REACTIVITY

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

| Hazardous Reactions                          | None under normal processing.               |
| Hazardous Polymerization                     | Hazardous polymerization does not occur.    |

**Conditions to Avoid**
None known based on information supplied.

**Incompatible Materials**

None known based on information supplied.

**Hazardous Decomposition Products**

None known based on information supplied.

# 11. TOXICOLOGICAL INFORMATION

## Information on likely routes of exposure

**Product Information**

Product does not present an acute toxicity hazard based on known or supplied information.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 56-81-5</td>
<td>= 12600 mg/kg (Rat)</td>
<td>&gt; 10 g/kg (Rabbit)</td>
<td>&gt; 570 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>= 4700 mg/kg (Rat)</td>
<td>= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

**Information on toxicological effects**

**Symptoms**

No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

- Sensitization: No information available.
- Mutagenic effects: No information available.
- Carcinogenicity: No information available.
- Reproductive toxicity: No information available.
- STOT: Single Exposure: No information available.
- STOT: Repeated Exposure: No information available.
- Target Organ Effects: No information available.
- Aspiration Hazard: No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document.

- ATEmix (oral): 2,234.00 mg/kg
- ATEmix (dermal): 18,016.00 mg/kg

# 12. ECOLOGICAL INFORMATION

## Ecotoxicity

5.8558 % of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>-1.76</td>
</tr>
<tr>
<td>56-81-5</td>
<td>Ethylene glycol</td>
</tr>
</tbody>
</table>

**Other adverse effects**
No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste Disposal Methods**
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

**Contaminated packaging**
Dispose of in accordance with local regulations.

### 14. TRANSPORT INFORMATION

**DOT**
Not regulated

**TDG**
Not regulated

**MEX**
Not regulated

**ICAO**
Not regulated

**ICAO/IATA**
Not regulated

**IMDG/IMO**
Not regulated

**RID**
Not regulated

**ADR/RID**
Not regulated

**ADN**
Not regulated

### 15. REGULATORY INFORMATION

**International Inventories**
For research use only

**TSCA**
-

**DSL/NDSL**
-

**EINECS/ELINCS**
-

**ENCS**
-

**IECS**
-

**KECL**
-

**PICCS**
-

**AICS**
-

**Legend:**
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Acute Health Hazard</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>5000 lb</td>
<td>-</td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Prop. 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>Developmental</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 56-81-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard 0</th>
<th>Flammability 0</th>
<th>Instability 0</th>
<th>Physical and chemical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health Hazard 0</td>
<td>Flammability 0</td>
<td>Physical Hazard 0</td>
<td>Personal protection X</td>
</tr>
</tbody>
</table>

Issuing Date 2016-07-21
Revision Date 2016-07-21
Revision Note No information available

Disclaimer
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End of Safety Data Sheet