1. PRODUCT AND COMPANY IDENTIFICATION

Product code 95071-250, 95071-012, 95071-05K.
Product name PerfeCtra™ SYBR® Green FastMix™, for iQ™

Manufacturer
QUANTA BIOSCIENCES INC.
202 PERRY PKWY., SUITE 1
GAITHERSBURG, MD 20877
301-956-1670

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl Sulfoxide</td>
<td>67-68-5</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview
Irritating to eyes. Irritating to skin. Components of the product may be absorbed into the body through the skin.

Form
Liquid

Potential Health Hazards
Eyes
  Irritating to eyes.
Skin
  Irritating to skin. Components of the product may be absorbed into the body through the skin
Inhalation
  May cause irritation of respiratory tract.
Ingestion
  May be harmful if swallowed.

Specific Effects
  Carcinogenic effects No information available
  Mutagenic effects No information available
  Reproductive toxicity No information available
  Sensitization No information available

Target Organ Effects
Eyes. Skin.

4. FIRST AID MEASURES

Skin contact
  Wash off immediately with plenty of soap and water. If irritation develops, get medical attention.

Eye contact
  Rinse thoroughly with plenty of water, also under the eyelids. If irritation persists, get medical attention.

Ingestion
  Never give anything by mouth to an unconscious person

Inhalation
  Move to fresh air

Notes to physician
  Treat symptomatically
5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Dry chemical

Special protective equipment for firefighters
Wear self-contained breathing apparatus and protective suit

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment

Methods for cleaning up
Soak up with inert absorbent material

7. HANDLING AND STORAGE

Handling
Avoid contact with skin and eyes.

Storage
Keep in properly labeled containers

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Exposure limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL (TWA)</th>
<th>OSHA PEL (Ceiling)</th>
<th>ACGIH OEL (TWA)</th>
<th>ACGIH OEL (STEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl Sulfoxide</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Engineering measures
Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment

Hand protection
Protective gloves

Eye protection
Safety glasses with side-shields

Skin and body protection
Lightweight protective clothing

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls
Prevent product from entering drains

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information
Form
Liquid

Important Health Safety and Environmental Information

<table>
<thead>
<tr>
<th>Property</th>
<th>°C</th>
<th>°F</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point/range</td>
<td>189</td>
<td>370</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>18.4</td>
<td>65.2</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>94</td>
<td>201</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Soluble</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions

Materials to avoid
No information available

Hazardous decompositions products
No information available

Polymerization
Hazardous polymerization does not occur
11. TOXICOLOGICAL INFORMATION

Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral, rat/mouse)</th>
<th>LD50 (dermal, rat/rabbit)</th>
<th>LC50 (inhalation, rat/mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl Sulfoxide</td>
<td>14500 mg/kg (Rat)</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Principle Routes of Exposure/ Potential Health Effects

- **Eyes**: Irritating to eyes.
- **Skin**: Irritating to skin. Components of the product may be absorbed into the body through the skin.
- **Inhalation**: May cause irritation of respiratory tract.
- **Ingestion**: May be harmful if swallowed.

Specific Effects

- **Carcinogenic effects**: No information available
- **Mutagenic effects**: No information available
- **Reproductive toxicity**: No information available
- **Sensitization**: No information available

Target Organ Effects

Eyes. Skin.

12. ECOLOGICAL INFORMATION

- **Ecotoxicity effects**: No information available
- **Mobility**: No information available
- **Biodegradation**: Inherently biodegradable
- **Bioaccumulation**: Does not bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

14. TRANSPORT INFORMATION

- **IATA**: Not classified as dangerous in the meaning of transport regulations
  - **Proper shipping name**: Not classified as dangerous in the meaning of transport regulations
  - **Hazard Class**: No information available
  - **Subsidiary Class**: No information available
  - **Packing group**: No information available
  - **UN-No**: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>PICCS</th>
<th>ENCS</th>
<th>DSL</th>
<th>NDSL</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td>-</td>
<td>Listed</td>
</tr>
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</table>

U.S. Federal Regulations

- **SARA 313**: Not regulated

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:
U.S. State Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts - RTK</th>
<th>New Jersey - RTK</th>
<th>Pennsylvania - RTK</th>
<th>Illinois - RTK</th>
<th>Rhode Island - RTK</th>
</tr>
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</table>

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

WHMIS Hazard class
D2B Toxic materials

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16. OTHER INFORMATION

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material.

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Since Quanta BioSciences cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

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iQ is a trademark of Bio-Rad Laboratories.

END of Safety Data Sheet