

SAFETY DATA SHEET

According to EC Directive 1907/2006/EC

SECTION 1 – IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

- 1.1 Product Identifier: **PerfeCta® qPCR ToughMix™**
 Product Code(s): Catalog numbers: 95112-125; 95112-250; 95112-012; 95112-05K
 Part Numbers: 84196, 84197
- 1.2 General Use: Laboratory reagent
 Product Description
 For Research Use Only, Not for Use in Diagnostic Procedures
- 1.3 Manufacturer/Supplier
 QUANTA BIOSCIENCES INC.
 202 PERRY PKWY., SUITE 1
 GAITHERSBURG, MD 20877
 USA
 Phone: +1 (301) 956-1670
 FAX: +1 (301) 956-1681
 Email: technical.support@quantabio.com
 www.quantabio.com
- 1.4 Emergency Telephone:
 Quanta BioSciences: +1 (301) 947-2913 (09:00 to 17:00 EST)
 Or contact your local distributor for Quanta BioSciences products.

SECTION 2 – HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture
 This product has been classified in accordance with Directive 1999/45/EC and does not meet the criteria for classification.
- 2.2 Label elements
 Labelling in accordance with Directive 1999/45/EC is not required.
- 2.3 Other hazards
 None known.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

CAS #	EINECS # / EC #	Chemical Name	Percentage (wt/wt)	Classifications (EU DSD / EU CLP)*
1185-53-1	214-684-5	2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.2 – 2	Xi; R36/37/38 Eye Irrit. 2 Skin Irrit. 2 STOT SE 3 H319 H315 H335
56-81-5	200-289-5	Glycerol	0.5 – 5	Substance with community workplace exposure limits

See Section 16 for full text of risk phrases and hazard statements.

*DSD = Directive 67/548/EEC – Dangerous Substances Directive

*CLP = Regulation 1272/2008 – Classification, Labelling, and Packaging

SAFETY DATA SHEET

According to EC Directive 1907/2006/EC

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures:

- EYES:** Immediately flush with contaminated eye(s) with lukewarm, gently flowing water for at least 5 minutes, while holding the eyelids(s) open. Remove any contact lenses and continue rinsing. Get medical attention if irritation persists after washing.
- SKIN:** Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes. If irritation develops and persists, get medical attention.
- INGESTION:** Rinse mouth thoroughly with water. If large amounts have been ingested, give 2 to 8 ounces of water. Get medical attention.
- INHALATION:** If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical advice.

4.2 Most important symptoms and effects, both acute and delayed:

- EYES:** May cause eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.
- SKIN:** May cause skin irritation.
- INGESTION:** May be harmful if swallowed in large quantities.
- INHALATION:** May cause irritation to the respiratory system if liquid is splashed or aerosolized.

4.3 Indication of any immediate medical attention and special treatment needed:

None

SECTION 5 – FIREFIGHTING MEASURES

- 5.1 Extinguishing media Use media suitable for surrounding fire.
- 5.2 Special hazards arising from the substance or mixture None
- 5.3 Advice for firefighters None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures Wear gloves and chemical eye goggles or glasses with side shields.
- 6.2 Environmental precautions Do not discard in drains or sewer systems.
- 6.3 Methods and material for containment and cleaning up Use absorbent suitable to the size and location of the spill. Discard absorbent with hazardous waste if applicable with local regulations.
- 6.4 Reference to other sections Review Sections 2, 3, and 8

SECTION 7 – HANDLING AND STORAGE

- 7.1 Precautions for safe handling Avoid contact with skin. Wash hands thoroughly after handling. Wear protective gloves and eye protection. Avoid breathing mist, vapours or aerosols. Use only in a well-ventilated area.

SAFETY DATA SHEET

According to EC Directive 1907/2006/EC

- 7.2 Conditions for safe storage, including any incompatibilities Store at -20°C in closed original container. Keep away from food, drink and animal feeding stuffs.
- 7.3 Specific end use(s) Not available

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Occupational exposure limits:

Chemical	Limit value – 8 hours		Limit value – Short term	
	ppm	mg/m ³	ppm	mg/m ³
<u>Glycerol:</u>				
Austria	-	-	-	-
Belgium	-	10	-	-
Denmark	-	-	-	-
European Union	-	-	-	-
France	-	10	-	-
Germany	-	10*	-	100*
Hungary	-	-	-	-
Italy	-	-	-	-
Poland	-	10	-	-
Spain	-	10	-	-
Sweden	-	-	-	-
The Netherlands	-	-	-	-
United Kingdom	-	10	-	-

* *inhalable aerosol*

8.1.2 Currently recommended monitoring procedures:

Not determined

8.1.3 Exposure guidelines for air contaminants, if any:

Not determined

8.1.4 DNELs and PNECs for exposure scenarios:

Not determined

8.1.5 Control banding for risk management:

Not determined

8.2 Exposure controls:

Engineering controls:

Use in well-ventilated area with mechanical exhaust when operations cause vapour or aerosol formation.

Respiratory protection:

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limits (OEL).

Skin & body protection:

Use protective gloves made of: butyl rubber. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Change out of clothes that become wet.

Eye protection:

Wear approved chemical safety goggles or safety glasses with

SAFETY DATA SHEET

According to EC Directive 1907/2006/EC

Thermal hazards:	None	side shields where exposure to vapour or aerosol or contact with eyes is reasonably probable. Provide eye wash station.
Environmental exposure controls:	None	

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	Blue liquid
Odour:	None
Odour threshold:	Not applicable
pH:	8.7
Melting/freezing point	Not measured
Initial boiling point & boiling range:	Not measured
Flash point:	Does not flash
Evaporation rate:	Not measured
Flammability (solid, gas):	Not applicable
Upper/lower flammability or explosive limits:	Not applicable
Vapour pressure:	Not measured
Vapour density:	Not measured
Relative density:	Not measured
Solubility(ies)	Complete in water
Partition coefficient:	Not measured
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Not applicable
Viscosity:	Not measured
Explosive properties:	None
Oxidising properties:	None
Other:	None

9.2 Other information:
None**SECTION 10 – STABILITY AND REACTIVITY**

10.1 Reactivity:	Stable
10.2 Chemicals stability:	Stable
10.3 Possibility of hazardous reactions:	Will not occur
10.4 Conditions to avoid:	Static discharges, hot sources, ignition sources

SAFETY DATA SHEET

According to EC Directive 1907/2006/EC

- 10.5 Incompatible materials: Avoid accidental contact with strong oxidizers (e.g., nitric acid)
- 10.6 Hazardous decomposition products: In case of fire, formation of CO_x

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixture:

The acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>Chemical Name</u>	<u>Oral LD₅₀</u>	<u>Dermal LD₅₀</u>	<u>Inhalation LC₅₀</u>
Tris(hydroxymethyl) aminomethane	5900 mg/kg (rat)	-	-
Glycerol	12600 mg/kg (rat)	>1000 mg/kg (rabbit)	>570 mg/m ³ (rat)

Category

Available data

Acute toxicity:	May be harmful if swallowed in large quantities. May cause irritation to the respiratory system if liquid is splashed or aerosolized.
Skin/eye irritation:	May cause skin irritation. May cause eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.
Corrosivity:	None
Respiratory or skin sensitisation:	Not expected
Germ cell mutagenicity:	Insufficient information for classification.
Carcinogenicity:	Not expected. None of the components at reportable levels have been designated as potential carcinogens by IARC (Group 1, 2A or 2B) or other foreign national agencies.
Reproductive toxicity:	Not expected if occupational exposure levels are observed.
STOT-SE:	May cause respiratory irritation.
STOT-RE:	Not expected if occupational exposure levels are observed.
Aspiration hazard:	Not expected

ROUTE OF ENTRY: Skin and/or eye contact. Less likely routes are inhalation or ingestion.

SECTION 12 – ECOLOGICAL INFORMATION

- 12.1 Toxicity: Does not meet criteria for acute ecotoxicity based on available information.
- 12.2 Persistence and degradability: Not determined. Insufficient information
- 12.3 Bioaccumulative potential: Not determined. Insufficient information
- 12.4 Mobility in soil: Not determined. Insufficient information
- 12.5 Results of PBT and vPvB assessment: Does not contain any ingredients that are assessed as PBT or vPvB.
- 12.6 Other adverse effects: None known

SAFETY DATA SHEET
According to EC Directive 1907/2006/EC

SECTION 13 – DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods:
Discard contents in compliance with local regulations.

SECTION 14 – TRANSPORT INFORMATION

ARD/RID Not regulated
Proper Shipping Name
Class
Classification Code
UN Number
Packing Group
Environmental hazard

IMDG Not regulated
Proper Shipping Name
Class
EmS
UN Number
Packing Group
Flashpoint

ICAO/IATA Not regulated
Proper Shipping Name
Class
Packing Instruction
UN Number
Packing Group

Special precautions for user: None known

SECTION 15 – REGULATORY INFORMATION

- 15.1 Safety health and environmental regulations:
Consult the most current list of restrictions for details. The following chemicals are indicated in Annex XII of Regulation 1907/2007.
None

- 15.2 Chemical Safety Assessment:
Has not been done.

SAFETY DATA SHEET

According to EC Directive 1907/2006/EC

SECTION 16 – OTHER INFORMATION

SDS Status: Original

List of R-phrases in Section 3

R36/37/38 Irritating to eyes, respiratory system and skin.

List of Hazard Statements in Section 3

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

*Methods used for evaluation: For CLP, other methods as described in each section of Parts 3 and 4 of Annex I**Classification in accordance with Regulation (EU) 1272/2008 in advance of June 1, 2015 required date:**Does not meet criteria for classification.*

KEY: DNEL = Derived No-Effect Level; IARC = International Agency for Research of Cancer; WEL = Workplace Exposure Limits; OEL = Occupational Exposure Limits; PBT = Persistent, Bioaccumulative, Toxic; PNEC = Predicted No-Effect Concentration; TWA = Time Weighted Average (8 hours); STEL = Short Term Exposure Limit (15 minutes); ppm = parts per million; vPvB = very Persistent, very Bioaccumulative

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.

PerfeCta is a registered trademark of Quanta BioSciences, Inc.

ToughMix is a trademark of Quanta BioSciences, Inc.