



SAFETY DATA SHEET

Issue date 17 February 2023

Version 2

1. IDENTIFICATION

Product name	PCR Enhancer Cocktail Combo
Product No	E640
Recommended use	Nucleic acid amplification
Supplier Address	DNA Polymerase Technology Inc. 1508 South Grand Blvd. Saint Louis MO 63014 USA
Phone Number	314 771 5566
Fax	314 771 5581
E-mail address	milko@klentaq.com
Emergency Phone	512 289 6324

2. HAZARDS IDENTIFICATION

Classification Not a hazardous substance or mixture

GHS Label elements Not a hazardous substance or mixture

Hazard Statement

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

Hazards not otherwise classified (HNOC) None

3.COMPOSITION/INFORMATION ON INGREDIENTS

PEC-1

Ingredient	% by weight	CAS #
Trade Secret	45.4	Trade Secret
Trade Secret	6.5	Trade Secret
Trade Secret	<1	Trade Secret

PEC-1 GC

Ingredient	% by weight	CAS #
Trade Secret	45.4	Trade Secret
Trade Secret	12.9	Trade Secret
Trade Secret	<1	Trade Secret

PEC-2

Ingredient	% by weight	CAS #
Trade Secret	45.4	Trade Secret
Trade Secret	6.5	Trade Secret
Trade Secret	<1	Trade Secret
Trade Secret	<1	Trade Secret

PEC-2 GC

Ingredient	% by weight	CAS #
Trade Secret	45.4	Trade Secret
Trade Secret	12.9	Trade Secret
Trade Secret	<1	Trade Secret
Trade Secret	<1	Trade Secret

PEC-P

Ingredient	% by weight	CAS #
Trade Secret	41.4	Trade Secret
Trade Secret	6.5	Trade Secret
Trade Secret	4	Trade Secret
Trade Secret	<1	Trade Secret

5M Betaine

Ingredient	% by weight	CAS #
Betaine (CH ₃) ₃ N ⁺ CH ₂ COO ⁻	59	107-43-7
Tris HCl NH ₂ C(CH ₂ OH) ₃ · HCl Tris(hydroxymethyl)aminomethane hydrochloride	<1	1185-53-1

4.FIRST AID MEASURES

First Aid Instructions

- Inhalation** Remove to fresh air.
- Skin contact** Wash skin with soap and water.
- Eye contact** Flush eyes with water.
- Ingestion** Rinse mouth with water.

Most important symptoms and effects, both acute and delayed

No information available.

Recommendations for medical care Treat symptomatically.

5.FIRE-FIGHTING MEASURES

Suitable extinguishing equipment

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide, as indicated by local circumstances and the surrounding environment.

Specific hazards arising from the chemical

No information available.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

6.ACCIDENTAL RELEASE MEASURES

Personal precautions and emergency procedures

Use of standard laboratory Personal Protective Equipment (PPE) such as a lab coat, gloves, and safety glasses is recommended. No evacuation, expert consultation, or additional PPE is required for dealing with accidental release.

Environmental precautions

Do not flush this product down the drain.

Containment and cleanup

Absorb with inert absorbent material and dispose with dry waste.

7.HANDLING AND STORAGE

Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage

Storage temperature -20° F
Storage Conditions Store in original containers with lids closed.
Incompatible materials unknown

8.EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

This product contains no components with exposure limits (OSHA PELs or ACGIH TLVs)

Engineering controls

Standard lab safety components such as showers, eyewash stations, and standard ventilation systems are recommended.

Personal protection measures

Use of standard laboratory Personal Protective Equipment (PPE) such as a lab coat, gloves, and safety glasses is recommended. Keep laboratory well ventilated. Handle product in accordance with good industrial hygiene and safety practice.

9.PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Appearance	colorless/cloudy
Odor	none/mild
Vapor pressure	No information available
pH	No information available
Relative density	No information available
Melting point / freezing point	No information available
Water solubility	No information available
Solubility in other solvents	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
Partition coefficient	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available

10.STABILITY AND REACTIVITY

Reactivity No data available.

Chemical stability Stable under recommended storage conditions.

Other **Possibility of hazardous reactions**

No hazardous reactions are known or expected. The product is not known to react or polymerize resulting in excess pressure, heat, or any other hazardous conditions.

Conditions to avoid

None

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

None are known or expected.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure

Inhalation Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Ingestion Avoid ingestion.

Skin contact Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.

Eye contact Avoid eye contact. May cause redness and irritation.

Delayed, immediate, or chronic effects from short and long-term exposure

None are known or expected.

Numerical measures of toxicity

Ingredient	% by weight	CAS #	LD50
Trade Secret	41.4 – 45.4	Trade Secret	No Data Available
Trade Secret	6.5 – 12.9	Trade Secret	LD50 Oral (rat) >5000 mg/kg LD50 Intraperitoneal (mouse) 750 mg/kg
Trade Secret	0 - 4	Trade Secret	Oral (rat) 100,000 mg/kg
Trade Secret	0 - <1	Trade Secret	LD50 Oral (mouse) >5000 mg/kg
Trade Secret	<1	Trade Secret	Oral (rat) 2,500 mg/kg

Ingredient	% by weight	CAS #	LD50
Betaine (CH ₃) ₃ N ⁺ CH ₂ COO ⁻	59	107-43-7	Oral (rat) > 11,179 mg/kg
Tris HCl NH ₂ C(CH ₂ OH) ₃ · HCl Tris(hydroxymethyl)aminomethane hydrochloride	<1	1185-53-1	Oral (rat) >5,000 mg/kg Dermal (rat) >5,000 mg/kg

Symptoms of exposure

No information available.

Potential carcinogen status

NTP Report on Carcinogens	Not a known or anticipated carcinogen
IARC Monographs	Not a probable, possible, or confirmed carcinogen
OSHA	Not listed

12.ECOLOGICAL INFORMATION

Ecotoxicity

Marine pollutants:

Component	Fish	Aquatic Invertebrates	Fresh water Algae	Bacteria
Betaine (CH ₃) ₃ N ⁺ CH ₂ COO ⁻ CAS 107-43-7	-	EC50 (water flea) 4,335 mg/L at 48 hours	ErC50 (green algae) 1,199 mg/L at 72 hours NOEC (green algae) 312.5 mg/l at 72 hours	-

No other components of this product are known to be toxic to fish, aquatic invertebrates, algae, and/or bacteria.

Persistence and degradability No information available

Bioaccumulation No information available

Mobility from soil to groundwater No information available

Other adverse effects No information available

13.DISPOSAL CONSIDERATIONS

Disposal guidelines Dispose with dry waste, do not flush down drains. Refer to Section 8 for PPE recommendations.

14.TRANSPORT INFORMATION

DOT Not regulated

15.REGULATORY INFORMATION

US Federal Regulations

No components are subject to reporting requirements

US State Regulations

California Proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts Right To Know Components

No components are subject to the Right to Know Act.

Pennsylvania Right To Know Components

Product contains Betaine CAS 107-43-7 and five other Right To Know components.

New Jersey Right To Know Components

Product contains Betaine CAS 107-43-7 and three other Right To Know components.

16.OTHER INFORMATION

This document was prepared on 17February2023

Disclaimer

IMPORTANT: The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under the control of DNA Polymerase Technology, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. DNA Polymerase Technology will not be liable for any damages resulting from handling or contact with the product.

**End of Safety
Data Sheet**