



Bulldog Bio Safety Data Sheet (SDS)

1. Identification

Product Name	TaqDog Premium DNA Polymerase, with 10x Reaction Buffer (no dNTP)
Cat No.	TQDG005S TQDG010 TQDG050 TQDG100 TQDG500
Synonyms	No information available
Recommended Use	For laboratory use only.
Restriction on Use	Not for food, drug, pesticide or biological product use. Not for human or animal drug use.
Company	Bulldog Bio, Inc.
Company Address	One New Hampshire Ave Suite 125 Portsmouth, NH 03801
Emergency Telephone Number	603-570-4248
Email address	info@bulldog-bio.com

2. Hazard Identification

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Hazards not other classified (HNOC) None Identified

3. Composition/ Information on Ingredients

Mixture:

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

Components	CAS-No.	Weight %
Glycerol	56-81-5	45 – 65
Water	7732-18-5	32 – 54.7
Recombinant Taq DNA Polymerase	NA	0.1 - 1

4. First-aid Measures

General Advice

The appearance is a colorless liquid. Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use)

or safety data sheet if possible). Remove from exposure, lie down. Do not breath dust/ fume/ gas/ mist/ vapors/ spray.

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if the symptoms (irritation, pain or discomfort) occur.
Inhalation	Move to fresh open air. Get medical attention immediately.
Ingestion	Clean mouth with plenty of water and drink plenty of water afterwards. Get medicinal attention if the symptoms (irritation, pain or discomfort) occur
Most important symptoms and affects	No information available
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing media appropriate to surrounding fire conditions.
Unsuitable Extinguishing Media	CAUTION: Use of water spray when fighting fire may be inefficient.
Flash Point Method - Autoignition Temperature	No information available
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	Not sensitive.
Specific Hazard Arising from the Chemical	Keep product and empty container away from heat and sources of ignition.
Hazardous Combustion Products	None known.
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	Avoid any contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation, especially in confined areas.
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Environmental Precautions

The solution should not be released into the environment. See section 12 for additional ecological information.

Methods for Containment and Clean Up

Absorb with sand or vermiculite. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.
 Alternatively, you may sweep up or vacuum up spillage and collect in a suitable container for disposal. Put up appropriate signs to maintain a 2-meter diameter around the spillage to ensure minimal contamination to personal in vicinity.

7. Handling and Storage

Precautions for Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment (PPE): appropriate gloves, cotton lab-coat and protective eye-gear. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation of the solution

Conditions for Safe Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products

No information available.

8. Exposure Controls/ Personal Protection

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycerol (CAS-No: 58-81-5)	-	TWA: 15 mg/m ³ mist, total TWA: 5 mg/ m ³ mist, respirable fraction (vacated) TWA: 10 mg/ m ³ mist, total particulate (vacated) TWA: 5 mg/ m ³ mist, respirable fraction	-

Engineering Measures

Showers, eye wash station

Personal Protective Equipment:

Eye/face Protection

Wear appropriate protective eyeglasses with side shields or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Use in well ventilated areas. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with local regulations.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practices.

9. Physical and Chemical Properties

Physical State	Liquid
Appearance	Colorless and clear
Odor	Mild
Odor Threshold	No information available
pH	8.0
Melting Point/Range	No data available
Boiling Point/ Range	No data available
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid, gas)	Not applicable
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity	No information available
Solubility	Miscible
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available

10. Stability and Reactivity

Reactive Hazard	None known, based on information available.
Stability	Stable under recommended normal conditions.
Conditions to Avoid	None known based on information supplied.
Incompatible Materials	Ignition sources. Heat
Hazardous Decomposition Products	Thermal decomposition can lead to the release of irritating and toxic gases and vapor. Carbon monoxide. Carbon dioxide.
Hazardous Polymerization	Hazardous polymerization has not been reported
Hazardous Reactions	Can react briskly with oxidizers – danger of explosion.

11. Toxicological Information

Information on Likely Routes of

Exposure:

Inhalation

Avoid breathing vapors or mist. May cause irritation of respiratory tract

Eye Contact

Redness. May cause slight irritation.

Skin Contact

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

Ingestion

May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Toxicologically Synergistic Products

No information available

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Irritation

Mild

Serious eye damage/ eye irritation

Mild

Corrosivity

Mild

Skin corrosion/ irritation

Mild

Mutagenic Effects

No information available.

Reproductive Effects

No information available.

Developmental Effects

No information available.

Teratogenicity

No information available.

STOT – single exposure

None known

STOT – repeated exposure

None known

Aspiration Hazard

No information available.

Symptoms/ effects (both acute and delayed)	No information available.
Endocrine Disruptor Information	No information available.
Target Organ Effects	Eyes, kidneys, respiratory system, skin.
Other Adverse Effects	The toxicological properties have not been fully investigated

12. Ecological Information

Ecotoxicity

No information available

1.17302 % of the mixture consists of component(s) of known hazards to the aquatic environment.

Persistence and Degradability

Miscible with water. Persistence is unlikely based on information available

Bioaccumulation / Accumulation

No information available

Mobility

Will likely be mobile in the environment due to its water solubility

Other Adverse Effects:

Ozone No information available

Ozone Depletion Potential (ODP) No information available

13. Disposal Considerations

Waste Disposal Considerations

Keep out of drains, sewers, ditches and waterways.

Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Contaminated Packaging

Empty containers must be triple rinsed prior to disposal.

14. Transport Information

DOT	Not regulated.
TDG	Not regulated.
IATA	Not regulated.
IMDG/IMO	Not regulated.

15. Regulator Information

International Inventories

TSCA (United States Toxic Substance Control Act Section 8(b) Inventory) Complies

US Federal Regulations

CWA (Clean Water Act)

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

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information	
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Prepared By	Bulldog Bio Inc.
Email	info@bulldog-bio.com
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Disclaimer:

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consequential or exemplary damages, howsoever arising, even if Bulldog Bio Incorporated has been advised of the possibility of such damages.

End of SDS