



SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2026
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SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION-----

Product Name T7 RNA Polymerase (5000U)
Product Code(s) 9K-005-0004
Recommended Use For Laboratory Research Use Only
Not for Human or Animal Drug Use

Supplier Bio Basic Inc.
Address 20 Konrad Crescent, Markham, Ontario,
Canada, L3R 8T4
Telephone (905) 474 4493
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For Chemical Emergency Phone# (416) 995 9730

SECTION 2. ----- HAZARDS IDENTIFICATION -----

Classification of the substance or mixture

Not a hazardous substance or material.

GHS Label elements, including precautionary statements

Not a hazardous substance or material.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Component	CAS-No	EC-No	Weight %
Glycerol	56-81-5	200-289-5	≤ 50
RNA polymerase	9014-24-8	N/A	≤ 1

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. ----- FIRST-AID MEASURES-----

If inhaled

If breathed in, move person into fresh air. Consult doctor if feeling unwell.

In case of skin contact

Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

Flush eyes with plenty of water. Remove contact lenses.

If swallowed

Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Rinse mouth with water.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Notes to physician

The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. -----FIREFIGHTING MEASURES-----

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

High volume water jet

Specific hazards during firefighting

Do not allow run-off from firefighting to enter drains or water courses.

Hazardous combustion products

Carbon oxides, metal oxides, gaseous hydrogen chloride (HCl).

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. -----ACCIDENTAL RELEASE MEASURES-----

Personal precautions

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

Reference to other sections

For disposal see section 13.

SECTION 7. -----HANDLING AND STORAGE-----

Precautions for safe handling

Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

Recommended storage temperature: see product label

Specific end use(s)

Apart from the uses mentioned in section 1, no other specific uses are stipulated.

SECTION 8. -----EXPOSURE CONTROLS/PERSONAL PROTECTION-----

Control parameters

Ingredients with workplace control parameters

Component	CAS-No	Value	Control parameters	Basis
Glycerol	56-81-5	TWA (Mist)	10 mg/m ³	CA BC OEL
		TWA (Respirable mist)	3 mg/m ³	CA BC OEL
		TWA (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	10 mg/m ³	CA QC OEL

Exposure controls

Appropriate engineering controls

Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment

Hand protection

Protective gloves. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. This recommendation is only valid for the product mentioned in the material safety data sheet and provided by us and for the application specified by us. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Respiratory protection

In the case of vapor formation, use a respirator with an approved filter.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles.

Skin and body protection

Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Control of environmental exposure

Do not let product enter drains.

SECTION 9. -----PHYSICAL AND CHEMICAL PROPERTIES-----

Appearance

Form	Liquid
Colour	Colourless

Safety data

Odour	Odourless
Odour Threshold	No data available
pH	7.9 (4°C)
Melting point/freezing point	No data available
Boiling point/range	No data available
Flash point	Does not flash
Evaporation rate	No data available
Flammability (liquids)	This product is not flammable; does not sustain combustion
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Relative vapour density	No data available
Relative density	No data available
Water solubility	Completely miscible
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available

Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	Not classified as oxidizing

SECTION 10. -----STABILITY AND REACTIVITY-----

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

The product is stable under normal conditions.

Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use. Stable under recommended storage conditions.

Conditions to avoid

No data available

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

In the event of fire: see section 5.

SECTION 11. -----TOXICOLOGICAL INFORMATION-----

Mixture

Acute toxicity

Oral: Acute toxicity estimate: > 2,000 mg/kg

Method: Calculation method

Inhalation: No data available

Dermal: Acute toxicity estimate: > 2,000 mg/kg

Method: Calculation method

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Components

Glycerol

Acute toxicity

Acute oral toxicity: LC50 (Mouse): 11,500 mg/kg

Acute inhalation toxicity: LC50 (Rat, male): 275000 mg/m3

Exposure time: 7 h

Test atmosphere: vapor

GLP: no

Assessment: The component/mixture is minimally toxic after short term inhalation.

Acute dermal toxicity: LD50 (Guinea pig, male and female): 56,750 mg/kg

GLP: no

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

GLP: no

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 7 Days

GLP: no

Respiratory or skin sensitization

Assessment: Mild eye irritant, Mild respiratory irritant, No skin irritation

Germ cell mutagenicity

Test Type: Microbial mutagenesis assay (Ames test)

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

GLP: No information available.

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

GLP: No information available.

Carcinogenicity

Species: Rat, male and female

Application Route: Oral

Exposure time: 2 Years

GLP: No information available.

Remarks: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Effects on fertility:

Test Type: Two-generation study

Species: Rat, male and female

Application Route: Oral

Dose: 2000 mg/kg bw/day

Fertility: NOAEL: 2,000 mg/kg body weight

GLP: no

Effects on fetal development:

Species: Rabbit, female

Application Route: Oral

Dose: 11.8, 54.8, 254.5, 1180 mg/kg bw/day

Duration of Single Treatment: 29 d

Developmental Toxicity: NOAEL: 1,180 mg/kg bw/day
GLP: no

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

RNA polymerase

Acute toxicity

Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg

Method: Expert judgment

Acute inhalation toxicity: Acute toxicity estimate: > 30 mg/l

Test atmosphere: dust/mist

Method: Expert judgment

Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg

Method: Expert judgment

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No data available

Additional information

Health injuries are not known or expected under normal use.

SECTION 12. -----ECOLOGICAL INFORMATION-----

Toxicity

Mixture

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Endocrine disrupting properties

No data available

Other adverse effects

No data available

Components

Glycerol

Toxicity to fish	static test LC50 - Oncorhynchus mykiss (rainbow trout) -54,000 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	static test LC50 - Daphnia magna (Water flea) -1,955 mg/l - 48 h GLP: no
Toxicity to algae/aquatic plants	static test - Scenedesmus quadricauda (Green algae): > 10,000 mg/l - 8 d, GLP: no
Toxicity to microorganisms	static test EC50 - (Pseudomonas putida): > 10,000 mg/l - 16 h GLP: No information available

RNA polymerase

Toxicity to fish	LC50 : > 100 mg/l Exposure time: 96 h
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SECTION 13. -----DISPOSAL CONSIDERATIONS-----

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14. -----TRANSPORT INFORMATION-----

TDG

Not regulated as a dangerous good

IMDG

Not regulated as a dangerous good

IATA

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Further information

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. ----- REGULATORY INFORMATION -----

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

SECTION 16. ----- OTHER INFORMATION -----

Further information: no limited for paper copy, just for internal uses.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS