Material Safety Datasheet (MSDS)

circRNA Isolation Kit (Cat. No. G4001)

Part. No.	Component Description
E099-1	Poly(A) Polymerase, E. coli
E099-2	10X Poly(A) Polymerase, E. coli Reaction Buffer
E099-3	ATP (10 mM)
G971	RNA Purification Magnetic Beads
E049-1	RNase R
E049-2	10X RNase R Reaction Buffer
G138	RNaseOFF Ribonuclease Inhibitor

Applied Biological Materials Inc.
1-3671 Viking Way, Richmond
BC, CANADA, V6V 2J5
www.abmgood.com

Updated: 06/12/2024
Version2.2

Material Safety Datasheet (MSDS)

Updated: 07/10/2024
Version 2.2
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	Poly(A) Polymerase, E. coli
Catalog # From Manufacturer	E099-1
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416
Fax	604-247-2414

Section 2 – Composition/Information on Ingredient

Substance Name	Glycerol
Formula	$C_3H_8O_3$
CAS Number	56-81-5
EEC-No	200-289-5
% by Weight	30-60%
Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 2 • Flammability: 0 • Reactivity: 0
NFPA Rating	• Health: 0 • Flammability: 0

	• Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician if persistent rash develops.
Inhalation	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician if breathing becomes difficult.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	Emits toxic fumes under fire conditions.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes.
Methods for Cleaning Up	Absorb spill using absorbent material, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete

Section 7 – Handling and Storage

Handling	User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Keep tightly closed. Store at -20°C.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection

	from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. • Hand: Protective gloves. • Eye: Chemical safety goggles.
General Hygiene Measures	Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Form	Liquid, viscous
Odour	Odourless
Melting Point	18.17°C
Boiling Temperature (°C)	290°C
Density	No data available.
Vapour Pressure	0.26 hPa at 100°C (212°F) 5.7 hPa at 150°C (302°F)
Solubility in Water	Miscible.
Flash Point	199°C
Explosion Limits	Upper explosion limit 19% (V) at 1013 hPa Lower explosion limit 2.7% (V) at 1013 hPa
Ignition Temperature	370°C

Section 10 – Stability and Reactivity

Stability	• Stability: Stable. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• Hazardous Decomposition Products: None under normal conditions.
Hazardous Polymerization	• Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Route of Exposure	• Skin Contact: May cause skin irritation. • Skin Absorption: May be harmful if absorbed through the skin. • Eye Contact: May cause eye irritation. • Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. • Ingestion: May be harmful if swallowed.
Signs and Symptoms of Exposure	Prolonged exposure can cause nausea, headache and vomiting. Chronic effects may target kidneys.

Section 12 – Ecological Information

N/A

Section 13 – Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• Proper Shipping Name: None • Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
IATA	• Non-Hazardous for Air Transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.

Material Safety Datasheet (MSDS)

Updated: 06/12/2024
Version 2.2
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	10X Poly(A) Polymerase, E. coli Reaction Buffer
Catalog # From Manufacturer	E099-2
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416
Fax	604-247-2414

Section 2 – Composition/Information on Ingredient

Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 2 • Flammability: 0 • Reactivity: 0
NFPA Rating	• Health: 2 • Flammability: 0 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician.
Inhalation	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	No special measures required.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes. Ensure adequate ventilation.
Methods for Cleaning Up	Absorb spill using absorbent material, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling	User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Suitable: Keep tightly closed. Store at -20°C.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. • Hand: Protective gloves. • Eye: Chemical safety goggles.

General Hygiene Measures	Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Form	Liquid.
Odour	Mild.
Melting Point	No data available.
Boiling Temperature (°C)	No data available.
Density	No data available.
Vapour Pressure	No data available.
Solubility in Water	No data available.
Flash Point	No data available.
Explosion Limits	No data available.
Ignition Temperature	No data available.

Section 10 – Stability and Reactivity

Stability	• Stability: Stable. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• Hazardous Decomposition Products: None under normal conditions.
Hazardous Polymerization	• Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Route of Exposure	• Skin Contact: May cause skin irritation. • Skin Absorption: May be harmful if absorbed through the skin. • Eye Contact: May cause eye irritation. • Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. • Ingestion: May be harmful if swallowed.
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 – Ecological Information

N/A

Section 13 – Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• Proper Shipping Name: None • Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
IATA	• Non-Hazardous for Air Transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.

Material Safety Datasheet (MSDS)

Updated: 06/12/2024
Version 2.2
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	ATP (10 mM)
Catalog # From Manufacturer	E099-3
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416
Fax	604-247-2414

Section 2 – Composition/Information on Ingredient

Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 2 • Flammability: 1 • Reactivity: 0
NFPA Rating	• Health: 2 • Flammability: 1 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician.
Inhalation	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	Emits toxic fumes under fire conditions.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes. Ensure adequate ventilation.
Methods for Cleaning Up	Absorb spill using absorbent material, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling	User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Suitable: Keep tightly closed. Store at -20°C.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. • Hand: Protective gloves. • Eye: Chemical safety goggles.

General Hygiene Measures	Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Form	Liquid.
Odour	Odourless.
Melting Point	No data available.
Boiling Temperature (°C)	No data available.
Density	No data available.
Vapour Pressure	No data available.
Solubility in Water	No data available.
Flash Point	No data available.
Explosion Limits	No data available.
Ignition Temperature	No data available.

Section 10 – Stability and Reactivity

Stability	• Stability: Stable. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• Hazardous Decomposition Products: None under normal conditions.
Hazardous Polymerization	• Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Route of Exposure	• Skin Contact: May cause skin irritation. • Skin Absorption: May be harmful if absorbed through the skin. • Eye Contact: May cause eye irritation. • Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. • Ingestion: May be harmful if swallowed.
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Repeated exposure may target the kidneys.

Section 12 – Ecological Information

N/A

Section 13 – Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• Proper Shipping Name: None • Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
IATA	• Non-Hazardous for Air Transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.

Material Safety Datasheet (MSDS)

Updated: 03/19/2024
Version 2.4
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	RNA Purification Magnetic Beads
Catalog # From Manufacturer	G971
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416
Fax	604-247-2414

Section 2 – Composition/Information on Ingredient

The product contains no substances which at their given concentrations are considered to be hazardous to health. We recommend handling all chemicals with caution.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 0 • Flammability: 0 • Reactivity: 0
NFPA Rating	• Health: 0 • Flammability: 0 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Flush thoroughly with water for at least 15 minutes and consult a physician.
Skin Contact	Immediately wash skin with soap and plenty of water.
Inhalation	Remove to fresh air. If breathing becomes difficult, call a physician.
Ingestion	Wash out mouth with plenty of water.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	In case of fire use carbon dioxide (C02), dry chemical, water spray or foam.
Specific Hazards	N/A

Section 6 – Accidental Release Measures

Personal Precautions	No special precautions are necessary. Use good laboratory procedures.
Methods for Cleaning Up	Soak up with inert absorbent material and dispose according to local regulations.

Section 7 – Handling and Storage

Handling	No special precautions are necessary. Use good laboratory procedures.
Storage	Keep vials tightly closed and store at 4°C. Do not freeze.

Section 8 – Exposure Controls/ PPE

Engineering Controls	No special engineering controls are required.
Personal Protective Equipment	•**Eye protection:** Safety glasses or chemical goggles should be worn to prevent eye contact. •**Skin protection:** Wear protective clothing and gloves as appropriate. •**Respiratory protection:** Under normal conditions the product should not require respiratory protection.

Section 9 – Physical and Chemical Properties

Form	Liquid, brown in colour

Odour	Odorless
Melting Point	No data available
Boiling Temperature (°C)	No data available
Density	No data available
Vapour Pressure	No data available
Solubility in Water	Miscible
Flash Point	No data available
Explosion Limits	No data available
Ignition Temperature	No data available

Section 10 – Stability and Reactivity

Stability	• Stability: Stable. • Materials to Avoid: Metals and metallic compounds.
Hazardous Decomposition Products	• None under normal conditions.
Hazardous Polymerization	• Will not occur.

Section 11 – Toxicological Information

Route of Exposure	•Skin Contact: not classified based on available data. •Skin Absorption: not classified based on available data. •Eye contact: not classified based on available data. •Inhalation: not classified based on available data. •Ingestion: not classified based on available data.
Signs and Symptoms of Exposure	No ingredients are listed as carcinogens by ACGIH, IARC, NTP, OSHA or EC 1272/2008.

Section 12 – Ecological Information

Contains no substances known to be hazardous to the environment. Hazardous degradation products are not likely. Do not allow undiluted product to enter sewer/surface or ground water.

Section 13 – Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

ICAO, IATA, DGR, US DOT, European ADR, RID, Canadian TDG	• Not regulated.

Section 15 – Regulatory Information

- WHMIS (Canada): Not regulated.
- HMIS (USA): Not regulated.

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.

Material Safety Datasheet (MSDS)

Updated: 06/03/2024
Version 2.2
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	RNase R
Catalog # From Manufacturer	E049-1
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416
Fax	604-247-2414

Section 2 – Composition/Information on Ingredient

Substance Name	Glycerol
Formula	$C_3H_8O_3$
CAS Number	56-81-5
EEC-No	200-289-5
% by Weight	30-60%
Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 2 • Flammability: 0 • Reactivity: 0
NFPA Rating	• Health: 0

	• Flammability: 0 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician if persistent rash develops.
Inhalation	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician if breathing becomes difficult.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical advice immediately.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	Emits toxic fumes under fire conditions.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust. Ensure adequate ventilation.
Methods for Cleaning Up	Wear protective eyewear, gloves and clothing. Keep in suitable closed containers for disposal.

Section 7 – Handling and Storage

Handling	User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Suitable: Keep tightly closed. Store at -20°C.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection

	from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. • Hand: Protective gloves. • Eye: Chemical safety goggles.
General Hygiene Measures	Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Form	Liquid, viscous.
Odour	Odourless.
Melting Point	18.17 °C
Boiling Temperature (°C)	290 °C
Density	No data available.
Vapour Pressure	0.26 hPa at 100 °C (212 °F) 5.7 hPa at 150 °C(302 °F)
Solubility in Water	miscible
Flash Point	199 °C
Explosion Limits	Upper explosion limit: 19 %(V) at 1013 hPa Lower explosion limit: 2.7 %(V) at 1013 hPa
Ignition Temperature	370 °C

Section 10 – Stability and Reactivity

Stability	• Stability: Stable. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• Hazardous Decomposition Products: None under normal conditions.
Hazardous Polymerization	• Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Route of Exposure	• Skin Contact: May cause skin irritation. • Skin Absorption: May be harmful if absorbed through the skin. • Eye Contact: May cause eye irritation. • Inhalation: Material may be irritating to mucous membranes and

	upper respiratory tract. May be harmful if inhaled. • Ingestion: May be harmful if swallowed.
Signs and Symptoms of Exposure	Prolonged exposure can cause nausea, headache, and vomiting. Chronic effects may target kidneys.

Section 12 – Ecological Information

N/A

Section 13 – Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• Proper Shipping Name: None • Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
IATA	• Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.

Material Safety Datasheet (MSDS)

Updated: 06/03/2024
Version 2.2
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	10X RNase R Reaction Buffer
Catalog # From Manufacturer	E049-2
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416
Fax	604-247-2414

Section 2 – Composition/Information on Ingredient

Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 2 • Flammability: 0 • Reactivity: 0
NFPA Rating	• Health: 2 • Flammability: 0 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician.

Inhalation	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	No special measures required.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust. Ensure adequate ventilation.
Methods for Cleaning Up	Wear protective eyewear, gloves and clothing. Keep in suitable closed containers for disposal.

Section 7 – Handling and Storage

Handling	User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Suitable: Keep tightly closed. Store at -20°C.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. • Hand: Protective gloves. • Eye: Chemical safety goggles.
General Hygiene Measures	Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Form	Liquid.

Odour	Mild.
Melting Point	No data available.
Boiling Temperature (°C)	No data available.
Density	No data available.
Vapour Pressure	No data available.
Solubility in Water	No data available.
Flash Point	No data available.
Explosion Limits	No data available.
Ignition Temperature	No data available.

Section 10 – Stability and Reactivity

Stability	• Stability: Stable. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• Hazardous Decomposition Products: None under normal conditions.
Hazardous Polymerization	• Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Route of Exposure	• Skin Contact: May cause skin irritation. • Skin Absorption: May be harmful if absorbed through the skin. • Eye Contact: May cause eye irritation. • Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. • Ingestion: May be harmful if swallowed.
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 – Ecological Information

N/A

Section 13 – Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• Proper Shipping Name: None • Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
IATA	• Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.

Material Safety Datasheet (MSDS)

Updated: 06/03/2024
Version 2.2
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	RNaseOFF Ribonuclease Inhibitor
Catalog # From Manufacturer	G138
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416
Fax	604-247-2414

Section 2 – Composition/Information on Ingredient

Chemical Name	CAS-No	EINECS-No	Weight %
Glycerol	56-81-5	200-289-5	30-60

Other Components	The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 0 • Flammability: 0 • Reactivity: 0
NFPA Rating	• Health: 0 • Flammability: 0 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician.
Inhalation	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	No special measures required.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust. Ensure adequate ventilation.
Methods for Cleaning Up	Soak up with inert absorbing materials and place in a closed container for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling	Always wear recommended Personal Protective Equipment. Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Keep tightly closed. Store at -20°C.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment	• Respiratory: Wear Suitable respiratory equipment if ventilation is insufficient. • Hand: Protective gloves. • Eye: Chemical safety goggles.
General Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

Section 9 – Physical and Chemical Properties

Form	Liquid, Colourless.
Odour	Odourless.
Melting Point	No data available.
Boiling Temperature (°C)	No data available.
Density	No data available.
Vapour Pressure	No data available.
Solubility in Water	Soluble in water.
Flash Point	No data available.
Explosion Limits	No data available.
Ignition Temperature	No data available.

Section 10 – Stability and Reactivity

Stability	• Stability: Stable under normal conditions. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• Hazardous Decomposition Products: None under normal conditions.
Hazardous Polymerization	• Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Acute Toxicity

Chemical Name	LD (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	No data available

Route of Exposure	• Skin Contact: May cause skin irritation. • Skin Absorption: May cause skin irritation in susceptible persons. • Eye Contact: May cause eye irritation. • Inhalation: May be harmful by inhalation. • Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 – Ecological Information

Ecotoxicity Effects	Daphina magna (Water Flea).
Mobility	see log Pow.
Biodegradation	Inherently biodegradable.
Bioaccumulation	Does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	Log Pow
Glycerol 56-81-5	-	Daphnia magna EC50>500mg/L (24h)	-	-	logPow–1.76

Section 13 – Disposal Considerations

Dispose of in accordance with local regulations.

Section 14 – Transportation Information

DOT	• Proper Shipping Name: None • Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
IATA	• Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 – Regulatory Information

Component	TSCA
Glycerol 56-81-5 (30-60)	Listed

U.S. Federal Regulations

SARA313	• Not Regulated by SARA
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs)	• Contains no HAPs.

U.S. State Regulations

Chemical Name	Massachusetts-RTK	New Jersey-RTK	Pennsylvania-RTK	Illinois-RTK	Rhode Island-RTK
Glycerol	**Lised**	**-**	**Listed**	**-**	**Listed**

Canadian Regulations

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.