

PowerMicrobial® Maxi Solution MAX1

SECTION 1. IDENTIFICATION

Product Identifier	PowerMicrobial® Maxi Solution MAX1
Other Means of Identification	Proprietary aqueous lysis solution
Other Identification	12226-1
Product Family	PowerMicrobial® Maxi DNA Isolation Kit
Recommended Use	For laboratory research purposes only.
Restrictions on Use	Not applicable.
Manufacturer / Supplier	MO BIO Laboratories, Inc., 2746 Loker Avenue West, Carlsbad, CA, 92010, Technical Support, 800-606-6246 , www.mobio.com
Emergency Phone No.	MO BIO Laboratories, Inc., 800-606-6246 , M-F 8:00AM-5:00PM PST

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion/irritation - Category 2; Serious eye damage/eye irritation - Category 1

GHS Label Elements



Signal Word:

Danger

Hazard Statement(s):

H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary Statement(s):

P264 Wash hands and skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P362 + P364 Take off contaminated clothing and wash it before reuse.

Other Hazards

Hazard Not Otherwise Classified (HNOC): None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Proprietary surfactant	CBI*	<5	n/a

Product Identifier: PowerMicrobial® Maxi Solution MAX1

Date of Preparation: April 27, 2015

Page 01 of 05

Notes

CBI = Confidential Business Information. The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air.

Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water.

First-aid Comments

Get medical advice/attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If on skin: may cause mild irritation. If in eyes: may cause moderate to severe irritation.

Immediate Medical Attention and Special Treatment

Special Instructions

Not applicable.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Heating increases the release of toxic vapor.

In a fire, the following hazardous materials may be generated: corrosive chemicals. Carbon oxides, Sulphur oxides, Sodium oxide.

Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

Product Identifier: PowerMicrobial® Maxi Solution MAX1

Date of Preparation: April 27, 2015

Page 02 of 05

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Only use where there is adequate ventilation. Do not get in eyes, on skin or on clothing. Wear personal protective equipment to avoid direct contact with this chemical. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. Avoid release to the environment.

Conditions for Safe Storage

Store in an area that is: cool, dry, ventilated. Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Not available.

Appropriate Engineering Controls

General ventilation is usually adequate.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Not normally required if product is used as directed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear liquid.
Odor	Odorless
Odor Threshold	Not available
pH	10.5 - 11.5
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapor Pressure	Not available
Vapor Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Not available in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Not applicable.

Incompatible Materials

Strong acids (e.g. hydrochloric acid), strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Toxic, corrosive chemicals.

SECTION 11. TOXICOLOGICAL INFORMATION**Likely Routes of Exposure**

Skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LD50 (oral)	LD50 (intraperitoneal)	LDLo (oral)
Proprietary surfactant	1,200 mg/kg (rat)	210 mg/kg (rat)	Not available

Skin Corrosion/Irritation

Human experience and animal tests show mild irritation.

Serious Eye Damage/Irritation

Human experience and animal tests show serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure**Inhalation**

No information was located.

Skin Absorption

No information was located.

Ingestion

May be harmful.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

No information was located.

Reproductive Toxicity**Development of Offspring**

No information was located.

Sexual Function and Fertility

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65: Not listed.

SECTION 16. OTHER INFORMATION

NFPA Rating	Health - 1	Flammability - 0	Instability - 0
SDS Prepared By	MO BIO Laboratories, Inc.		
Phone No.	800-606-6246		
Date of Preparation	April 27, 2015		
Disclaimer	This Safety Data Sheet (SDS) is intended only as a guide for the appropriate handling of this product by a properly trained individual. Individuals receiving this information must make their own determination as to the appropriateness of using this product for a particular purpose, and to ensure that appropriate protective measures are in place to prevent exposure, property damage, or improper environmental release. MO BIO Laboratories, Inc. shall not be held liable for damages of any nature resulting from the above product or reliance upon this information.		

PowerMicrobial® Maxi Solution MAX2

SECTION 1. IDENTIFICATION

Product Identifier	PowerMicrobial® Maxi Solution MAX2
Other Means of Identification	Proprietary aqueous bind solution
Other Identification	12226-2
Product Family	PowerMicrobial® Maxi DNA Isolation Kit
Recommended Use	For laboratory research purposes only.
Restrictions on Use	Not applicable.
Manufacturer / Supplier	MO BIO Laboratories, Inc., 2746 Loker Avenue West, Carlsbad, CA, 92010, Technical Support, 800-606-6246 , www.mobio.com
Emergency Phone No.	MO BIO Laboratories, Inc., 800-606-6246 , M-F 8:00AM-5:00PM PST

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) - Category 4; Skin corrosion/irritation - Category 2; Serious eye damage/eye irritation - Category 2A

GHS Label Elements



Signal Word:

Warning

Hazard Statement(s):

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary Statement(s):

P264 Wash hands and skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

Other Hazards

Hazard Not Otherwise Classified (HNOC): None known.

Product Identifier: PowerMicrobial® Maxi Solution MAX2

Date of Preparation: April 29, 2015

Page 01 of 05

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Proprietary chaotropic agent	CBI*	40-60	n/a

Notes

CBI = Confidential Business Information. The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air.

Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water.

First-aid Comments

Get medical advice/attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If on skin: may cause mild irritation. If in eyes: may cause moderate to severe irritation.

Immediate Medical Attention and Special Treatment

Special Instructions

Not applicable.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Heating increases the release of toxic vapor.

In a fire, the following hazardous materials may be generated: Carbon oxides, Hydrogen chloride gas. Nitrogen oxides.

Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, if ventilation is not

Product Identifier: PowerMicrobial® Maxi Solution MAX2

Date of Preparation: April 29, 2015

Page 02 of 05

sufficient.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Only use where there is adequate ventilation. Do not get in eyes, on skin or on clothing. Wear personal protective equipment to avoid direct contact with this chemical. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. Avoid release to the environment.

Conditions for Safe Storage

Store in an area that is: cool, dry, ventilated. Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Not available.

Appropriate Engineering Controls

General ventilation is usually adequate.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Not normally required if product is used as directed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear liquid.
Odor	Odorless
Odor Threshold	Not available
pH	6.5 - 7.0
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapor Pressure	Not available
Vapor Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Not available in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available

Product Identifier: PowerMicrobial® Maxi Solution MAX2

Date of Preparation: April 29, 2015

Page 03 of 05

Auto-ignition Temperature Not available
Decomposition Temperature Not available
Viscosity Not available (kinematic); Not available (dynamic)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Not applicable.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Toxic, corrosive chemicals.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LD50 (oral)	LD50 (dermal)	LC50
Proprietary chaotropic agent	475 mg/kg (rat)	2,000 mg/kg (rabbit)	Not available

Skin Corrosion/Irritation

Animal tests show mild irritation.

Serious Eye Damage/Irritation

Animal tests show serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

No information was located.

Skin Absorption

No information was located.

Ingestion

May be harmful.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

No information was located.

Reproductive Toxicity

Development of Offspring

No information was located.

Product Identifier: PowerMicrobial® Maxi Solution MAX2

Date of Preparation: April 29, 2015

Page 04 of 05

Sexual Function and Fertility

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65: Not listed.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 2** **Flammability - 0** **Instability - 0**

SDS Prepared By MO BIO Laboratories, Inc.

Phone No. 800-606-6246

Date of Preparation April 29, 2015

Disclaimer This Safety Data Sheet (SDS) is intended only as a guide for the appropriate handling of this product by a properly trained individual. Individuals receiving this information must make their own determination as to the appropriateness of using this product for a particular purpose, and to ensure that appropriate protective measures are in place to prevent exposure, property damage, or improper environmental release. MO BIO Laboratories, Inc. shall not be held liable for damages of any nature resulting from the above product or reliance upon this information.

PowerMicrobial® Maxi Solution MAX3

SECTION 1. IDENTIFICATION

Product Identifier	PowerMicrobial® Maxi Solution MAX3
Other Means of Identification	Aqueous solution of ethyl alcohol
Other Identification	12226-3
Product Family	PowerMicrobial® Maxi DNA Isolation Kit
Recommended Use	For laboratory research purposes only.
Restrictions on Use	Not applicable.
Manufacturer / Supplier	MO BIO Laboratories, Inc., 2746 Loker Avenue West, Carlsbad, CA, 92010, Technical Support, 800-606-6246 , www.mobio.com
Emergency Phone No.	MO BIO Laboratories, Inc., 800-606-6246 , M-F 8:00AM-5:00PM PST

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquid - Category 3

GHS Label Elements



Signal Word:

Warning

Hazard Statement(s):

H226 Flammable liquid and vapor.

Precautionary Statement(s):

P210 Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating, lighting, and other equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370 + P378 In case of fire: Use appropriate foam to extinguish.

P403 + P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

Other Hazards

Hazard Not Otherwise Classified (HNOC): None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Identifier: PowerMicrobial® Maxi Solution MAX3

Date of Preparation: April 22, 2015

Page 01 of 05

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Ethanol	64-17-5	30-60	Ethyl alcohol

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air.

Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water.

First-aid Comments

Get medical advice/attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

Not applicable.

Immediate Medical Attention and Special Treatment

Special Instructions

Not applicable.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Flammable liquid and vapor. Can ignite at room temperature. Releases vapor that can form explosive mixture with air. Heating increases the release of toxic vapor.

In a fire, the following hazardous materials may be generated: flammable chemicals.

Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, if ventilation is not sufficient.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Product Identifier: PowerMicrobial® Maxi Solution MAX3

Date of Preparation: April 22, 2015

Page 02 of 05

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Only use where there is adequate ventilation. Do not get in eyes, on skin or on clothing. Wear personal protective equipment to avoid direct contact with this chemical. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. Avoid release to the environment.

Conditions for Safe Storage

Store in an area that is: cool, dry, ventilated. Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL		NIOSH-RELS	
	TWA	STEL	TWA	Ceiling	TWA	STEL
Ethanol	1000 ppm	Not established	1000 ppm	Not established	1000 ppm	Not established

Appropriate Engineering Controls

General ventilation is usually adequate.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Not normally required if product is used as directed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear liquid.
Odor	Alcoholic
Odor Threshold	Not available
pH	7.0 - 8.0
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapor Pressure	Not available
Vapor Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Not available in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available

Product Identifier: PowerMicrobial® Maxi Solution MAX3

Date of Preparation: April 22, 2015

Page 03 of 05

Decomposition Temperature Not available
Viscosity Not available (kinematic); Not available (dynamic)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

May cause a fire.

Conditions to Avoid

Heat. Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Flammable chemicals; toxic chemicals.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin contact; eye contact; ingestion; inhalation.

Acute Toxicity

Chemical Name	LD50 (oral)	LD50 (dermal)	LC50
Ethanol	7,060 mg/kg (rat)	Not available	20,000 ppm (rat)

Skin Corrosion/Irritation

Not a skin irritant.

Serious Eye Damage/Irritation

Animal tests show mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause nose and throat irritation.

Skin Absorption

No information was located.

Ingestion

Symptoms may include headache, nausea, dizziness, drowsiness and confusion. Depression of the central nervous system.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

No information was located.

Reproductive Toxicity

Development of Offspring

No information was located.

Product Identifier: PowerMicrobial® Maxi Solution MAX3

Date of Preparation: April 22, 2015

Page 04 of 05

Sexual Function and Fertility

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal Methods**

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	1170	Ethanol solution	3	III
IATA (Air)	1170	Ethanol solution	3	III

SECTION 15. REGULATORY INFORMATION**Safety, Health and Environmental Regulations****USA****Toxic Substances Control Act (TSCA) Section 8(b)**

Listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65: Not listed.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 1** **Flammability - 3** **Instability - 0**

SDS Prepared By MO BIO Laboratories, Inc.

Phone No. 800-606-6246

Date of Preparation April 22, 2015

Revision Indicators The following SDS content was changed on November 16, 2015:
SECTION 14. TRANSPORT INFORMATION; Shipping Information.

Disclaimer This Safety Data Sheet (SDS) is intended only as a guide for the appropriate handling of this product by a properly trained individual. Individuals receiving this information must make their own determination as to the appropriateness of using this product for a particular purpose, and to ensure that appropriate protective measures are in place to prevent exposure, property damage, or improper environmental release. MO BIO Laboratories, Inc. shall not be held liable for damages of any nature resulting from the above product or reliance upon this information.

PowerMicrobial® Maxi Solution MAX4

SECTION 1. IDENTIFICATION

Product Identifier	PowerMicrobial® Maxi Solution MAX4
Other Means of Identification	Elution buffer (10mM tris)
Other Identification	12226-4
Product Family	PowerMicrobial® Maxi DNA Isolation Kit
Recommended Use	For laboratory research purposes only.
Restrictions on Use	Not applicable.
Manufacturer / Supplier	MO BIO Laboratories, Inc., 2746 Loker Avenue West, Carlsbad, CA, 92010, Technical Support, 800-606-6246 , www.mobio.com
Emergency Phone No.	MO BIO Laboratories, Inc., 800-606-6246 , M-F 8:00AM-5:00PM PST

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not classified under any GHS hazard classes.

GHS Label Elements

Not applicable

Other Hazards

Hazard Not Otherwise Classified (HNOC): None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	<0.1	Tris HCl
2-Amino-2-(hydroxymethyl)-1,3-propanediol	77-86-1	<0.1	Tris base

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air.

Skin Contact

Rinse with lukewarm, gently flowing water for 5 minutes.

Eye Contact

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water.

First-aid Comments

Product Identifier: PowerMicrobial® Maxi Solution MAX4

Date of Preparation: April 22, 2015

Page 01 of 05

Get medical advice/attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Special Instructions

Not applicable.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Heating increases the release of toxic vapor.

In a fire, the following hazardous materials may be generated: Carbon oxides. Nitrogen oxides.

Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

Conditions for Safe Storage

Store in an area that is: cool, dry, ventilated. Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Not available.

Appropriate Engineering Controls

General ventilation is usually adequate.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Not normally required if product is used as directed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear liquid.
Odor	Odorless
Odor Threshold	Not available
pH	8.0 - 8.5
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapor Pressure	Not available
Vapor Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Not available in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Not applicable.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Not applicable.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin contact; eye contact; ingestion.

Acute Toxicity

LC50: No information was located.

LD50 (oral): No information was located.

LD50 (dermal): No information was located.

Skin Corrosion/Irritation

No information was located.

Product Identifier: PowerMicrobial® Maxi Solution MAX4

Date of Preparation: April 22, 2015

Page 03 of 05

Serious Eye Damage/Irritation

No information was located.

STOT (Specific Target Organ Toxicity) - Single Exposure**Inhalation**

No information was located.

Skin Absorption

No information was located.

Ingestion

No information was located.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

No information was located.

Reproductive Toxicity**Development of Offspring**

No information was located.

Sexual Function and Fertility

No information was located.

Germ Cell Mutagenicity

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal Methods**

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

SECTION 15. REGULATORY INFORMATION**Safety, Health and Environmental Regulations****USA****Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65: Not listed.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 0** **Flammability - 0** **Instability - 0**

SDS Prepared By MO BIO Laboratories, Inc.

Product Identifier: PowerMicrobial® Maxi Solution MAX4

Date of Preparation: April 22, 2015

Phone No. 800-606-6246

Date of Preparation April 22, 2015

Disclaimer This Safety Data Sheet (SDS) is intended only as a guide for the appropriate handling of this product by a properly trained individual. Individuals receiving this information must make their own determination as to the appropriateness of using this product for a particular purpose, and to ensure that appropriate protective measures are in place to prevent exposure, property damage, or improper environmental release. MO BIO Laboratories, Inc. shall not be held liable for damages of any nature resulting from the above product or reliance upon this information.

Product Identifier: PowerMicrobial® Maxi Solution MAX4

Date of Preparation: April 22, 2015

Page 05 of 05

PowerMicrobial® Maxi Bead Solution

SECTION 1. IDENTIFICATION

Product Identifier	PowerMicrobial® Maxi Bead Solution
Other Means of Identification	Aqueous solution of guanidine thiocyanate
Other Identification	12226-BS
Product Family	PowerMicrobial® Maxi DNA Isolation Kit
Recommended Use	For laboratory research purposes only.
Restrictions on Use	Not applicable.
Manufacturer / Supplier	MO BIO Laboratories, Inc., 2746 Loker Avenue West, Carlsbad, CA, 92010, Technical Support, 800-606-6246 , www.mobio.com
Emergency Phone No.	MO BIO Laboratories, Inc., 800-606-6246 , M-F 8:00AM-5:00PM PST

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion/irritation - Category 2; Serious eye damage/eye irritation - Category 2A

GHS Label Elements



Signal Word:

Warning

Hazard Statement(s):

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary Statement(s):

P264 Wash hands and skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

Other Hazards

Hazard Not Otherwise Classified (HNOC): None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Thiocyanic acid, compd. with guanidine (1:1)	593-84-0	<3	Guanidine thiocyanate

Product Identifier: PowerMicrobial® Maxi Bead Solution

Date of Preparation: April 27, 2015

Page 01 of 05

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air.

Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water.

First-aid Comments

Get medical advice/attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If in eyes: causes moderate to severe irritation. If on skin: causes mild irritation.

Immediate Medical Attention and Special Treatment

Special Instructions

Not applicable.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Heating increases the release of toxic vapor.

In a fire, the following hazardous materials may be generated: Carbon oxides, Sulphur oxides. Nitrogen oxides.

Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Only use where there is adequate ventilation. Do not get in eyes, on skin or on clothing. Wear personal protective

equipment to avoid direct contact with this chemical. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. Avoid release to the environment.

Conditions for Safe Storage

Store in an area that is: cool, dry, ventilated. Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Not available.

Appropriate Engineering Controls

General ventilation is usually adequate.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Not normally required if product is used as directed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear liquid.
Odor	Odorless
Odor Threshold	Not available
pH	8.5 - 9.5
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapor Pressure	Not available
Vapor Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Not available in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Product Identifier: PowerMicrobial® Maxi Bead Solution

Date of Preparation: April 27, 2015

Page 03 of 05

Conditions to Avoid

Not applicable.

Incompatible Materials

Strong acids (e.g. hydrochloric acid), strong oxidizing agents (e.g. perchloric acid), cyanides.

Hazardous Decomposition Products

Very toxic chemicals.

SECTION 11. TOXICOLOGICAL INFORMATION**Likely Routes of Exposure**

Skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LD50 (oral)	LD50 (intraperitoneal)	LC50
Thiocyanic acid, compd. with guanidine (1:1)	593 mg/kg (rat)	300 mg/kg (mouse)	Not available

Skin Corrosion/Irritation

No information was located.

Serious Eye Damage/Irritation

No information was located.

STOT (Specific Target Organ Toxicity) - Single Exposure**Inhalation**

No information was located.

Skin Absorption

No information was located.

Ingestion

No information was located.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

No information was located.

Reproductive Toxicity**Development of Offspring**

No information was located.

Sexual Function and Fertility

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located.

Product Identifier: PowerMicrobial® Maxi Bead Solution

Date of Preparation: April 27, 2015

Page 04 of 05

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65: Not listed.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 1** **Flammability - 0** **Instability - 0**

SDS Prepared By MO BIO Laboratories, Inc.

Phone No. 800-606-6246

Date of Preparation April 27, 2015

Disclaimer This Safety Data Sheet (SDS) is intended only as a guide for the appropriate handling of this product by a properly trained individual. Individuals receiving this information must make their own determination as to the appropriateness of using this product for a particular purpose, and to ensure that appropriate protective measures are in place to prevent exposure, property damage, or improper environmental release. MO BIO Laboratories, Inc. shall not be held liable for damages of any nature resulting from the above product or reliance upon this information.