

Safety Data Sheet

Classification in accordance with Global Harmonizing System (GHS)

Note: This product is deemed non-hazardous

SECTION 1: Identification of The Substance/Mixture and of the Company Undertaking

1.1 Product Identifier

Product Name Cap-Clip™ Acid Pyrophosphatase
Product Number C-CC15011H

1.2 Recommended Use and Restrictions on Use

Enzyme solution. Avoid concentration of components by evaporation. Use within prescribed temperature parameters. This product is for research and development use only.

1.3 Details of the Supplier of the Safety Data Sheet

Company	CELLSCRIPT™, LLC.
Address	726 Post Road
City, State, Zip Code	Madison, WI 53713
Country	USA
Telephone Number	888-826-5586
Email Address	customerservice@cellscript.com
Emergency Telephone Number	1-608-442-6484 Monday to Friday 9am-5pm CST

SECTION 2: Hazard(s) Identification

This product with the given component concentrations is not considered a hazardous mixture or substance.

Hazards not otherwise classified: No data available. This product as provided is not considered a hazardous mixture or substance.

SECTION 3: Composition / Information on Ingredients

3.1 Components of Substance or Mixture

Chemical name	Formula	CAS number	EC number	Concentration
Cap-Clip™ Acid Pyrophosphatase	N/A	N/A	N/A	5 U/ul
Glycerol	C ₃ H ₈ O ₃	56-81-5	200-289-5	50%
Tris(hydroxymethyl)aminomethane	(HOCH ₂) ₃ CNH ₂	77-86-1	201-064-4	10 mM
Sodium chloride	NaCl	7647-14-5	231-598-3	100 mM
Dithiothreitol (DTT)	C ₄ H ₁₀ O ₂ S ₂	3483-12-3	222-468-7	1 mM
Ethylenediaminetetraacetic acid (EDTA)	C ₁₀ H ₁₆ N ₂ O ₈	60-00-4	200-449-4	0.1 mM
Triton X-100	C ₁₄ H ₂₂ O(C ₂ H ₄ O) _n (n=9-10)	9002-93-1		0.01%

Impurities: Not known.

SECTION 4: First Aid Measures

4.1 Description of first aid measures

Eye: Eye irritation: Remove contact lenses, hold eye lids open and flush eye with plenty of water (or buffered saline eye wash) for at least 15 minutes. Check pH of tears with indicator paper and continue flushing, if necessary. If eye irritation occurs, get medical advice/attention.

Skin: Skin irritation: Remove contaminated clothing and wash before reuse. Gently wash the contaminated area with plenty of soap and water for at least 15 minutes. If skin irritation or rash develops, get medical advice/attention.

Inhalation: Nasal/lung irritation: Move person to fresh air. If not breathing clear airway and start cardiopulmonary resuscitation (CPR), avoid mouth-to-mouth; give artificial respiration and get medical attention. If respiratory irritation, dizziness, nausea occurs, get medical advice/attention.

Ingestion: Internal (mouth, throat, stomach, etc.) irritation: Rinse mouth with water. Do not induce vomiting. If feeling unwell, get medical advice/attention

4.2 Most important symptoms and effects

Acute and Delayed No data available

CHRONIC Not available

4.3 Recommendations for immediate medical care and special treatment needed

No data available

SECTION 5: Fire Fighting Measures

Suitable extinguishing media:	Use water spray alcohol resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media:	None
Special hazards arising from mixture:	No Data Available
Advice for firefighters:	Wear self-contained breathing apparatus while extinguishing the fire. Avoid concentration to solids by evaporation.

SECTION 6: Accidental Release Measures

6.1 Personal precautions and protective equipment (PPE) and emergency procedures.

Personal precautions and protective equipment (PPE):

Depending on the extent of release, consider the need for trained firefighters/ emergency responders with adequate PPE for cleaning up. Keep unnecessary people away. Wear proper PPE.

Environmental precautions:

Prevent spills from entering storm sewers, drains or waterways, Prevent release to the environment.

Methods and material for containment and cleaning up.

How to contain spill:	Absorb onto combustible material (sawdust or absorbent paper).
Cleaning-up methods:	Shovel/sweep up debris and store in a sealed plastic container. Discard in trash slated only for incineration.

Additional information pertaining to the spill: Bulk materials and spill debris (> 10 ml) should be disposed of as hazardous waste.

Reference to other sections: See section 8 for further information on protective clothing and equipment, see section 13 for advice on waste disposal.

SECTION 7—Handling and Storage

7.1 Safe handling

Precautions for safe handling:	Do not get in eyes or on skin, breathe vapors or mists. Ensure good ventilation.
General hygiene advice:	Use good industrial hygiene and safety practices. Wash hands before breaks, in use, and at the end of the workday.
Measures to prevent fire:	Not available
Measures to prevent aerosol/dust generation:	Not available
Measures to protect the environment:	Not available

7.2 Conditions for safe storage, including any incompatibilities.

Technical measures and storage conditions:	Store at -20°C in a freezer without a defrost cycle. Do not store at -70°C.
Packaging materials:	Store in original container.
Requirements for storage rooms and vessels:	Not available
Specific end use(s):	Avoid concentration of liquid.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Glycerol (CAS 56-81-5)	TWA	USA	5 mg/m ³ , mist, respirable fraction 15 mg/m ³ , mist, total particulate	OSHA PEL

8.2 Engineering controls

Safety shower and eye wash station.

8.3 Personal protection equipment

Eye/face protection:	Safety glasses with side shields or goggles approved by government standards such as NIOSH (US), CEN (EU) and WHMIS (CA).
Skin/body protection:	Wear lab coat
Hand protection:	Latex, nitrile or rubber gloves
Respiratory protection:	Use in a well-ventilated area.

8.4 Thermal hazards

Keep open vial at/between 4°C and room temperature.

8.5 General health & safety measures

Use clean laboratory practices and personal protection equipment

8.6 Environmental exposure controls

Triple rinse product (polypropylene) containers with water before recycling.

SECTION 9—Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Appearance/color	Clear
Odor:	None
Odor threshold:	None
pH:	7.5
Melting point/freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash Point:	Not available
Evaporation rate:	Not available
Flammability:	Not available
Lower flammability/explosive limit:	None
Upper flammability/explosive limit:	None
Vapor pressure:	Not available
Vapor density:	Not available
Relative density:	Not available
Solubility:	Water soluble
Partition coefficient: n-octanol/water:	Unknown
Auto-ignition temperature:	Unknown
Decomposition temperature:	Not available
Viscosity:	Unknown
Explosive properties:	None
Oxidizing properties:	None
Other information:	Not available

SECTION 10: Stability and Reactivity

Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	Explosive with strong oxidizers.
Conditions to avoid:	Avoid concentration of liquid mixture to solids.
Incompatible materials:	Nitric acid, perchloric acid.
Hazardous decomposition products:	Carbon oxides and nitrous oxides.

SECTION 11: Toxicological Information

Likely routes of exposure: Inhalation; ingestion, eye and skin contact.

11.1 Acute effects

Eye: Redness and soreness.
Skin: Redness, rash, burning, dry, and itching skin.
Inhalation: Nasal irritation, headache, cough, shortness of breath.
Ingestion: Malaise, dizziness, and nausea, gastrointestinal burns.
Toxicity: Not available

Skin corrosion/irritation: Mild
Serious eye damage/irritation: Mild
Respiratory or skin sensitization: Mild
STOT-single exposure: Not available
Chronic health effects: Not available
Carcinogenicity: Not available
Germ cell mutagenicity: Not available
Reproductive toxicity: Not available
Developmental: Not available
Fertility: Not available
STOT-repeated exposure: Not available
Aspiration hazard: Not available
Other information: None

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

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

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

SECTION 12: Ecological Information

12.1 Ecotoxicity

Acute toxicity: Not available
Chronic toxicity: Not available
Eco/aquatic toxicity: Not available

12.2 Persistence and Degradability

Abiotic degradation:	Not available
Physical- and photo-chemical elimination:	Not available
Biodegradation:	Not available
Bioaccumulative potential:	Not available

12.3 Biological oxygen demand

Theoretical oxygen demand at 10 ppm:	Not available
Chemical oxygen demand at 10 ppm:	Not available
Biological oxygen demand-5 at 10 ppm:	Not available

12.4 Known or predicted distribution to environmental compartments

Surface tension:	Not available
Absorption/desorption:	Not available
Mobility in soil:	Not available

12.5 Results of PBT and vPvB assessment

PBT results:	Not available
PvB results:	Not available

12.6 Other adverse effects

Additional information:	None
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SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Product/packaging disposal:	Dispose of material in accordance with all federal, state, and local regulations. Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by chemical incinerator.
Waste codes/waste designations according to LoW:	Unknown
Waste treatment-relevant information:	Dispose of material in accordance with all federal, state, and local regulations.
Sewage disposal-relevant information:	Prevent material from entering drains, sewer and waterways.
Other disposal recommendations:	None

SECTION 14: Transport Information

This product is classified as not hazardous and is not regulated by US Department of Transportation (DOT), ADR/RID (cross border) IMDG and IATA/ICAO.

UN number:	Not classified
UN proper shipping name:	Not classified
Transport hazard class(es):	Not classified
Packing group:	Not classified
Environmental hazards:	Not available
Special precautions for user:	Do not transport until safety precautions have been read and understood.

SECTION 15: Regulatory Information

15.1 Occupational Safety and health Administration (OSHA) Hazards

Not listed

15.2 CERCLA

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

15.3 Massachusetts Right-To-Know Substance List

Not listed

15.4 Pennsylvania Right-To-Know hazardous Substances

Not listed

15.5 New Jersey Worker and Community Right-To-Know components

Glycerin (CAS# 56-81-5): Present

Ethylenediaminetetraacetic acid (CAS# 60-00-4): Present

15.6 California Proposition 65

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

15.7 United States of America Toxic Substances Control Act (TSCA) List

All ingredients are listed in the TSCA Inventory.

15.8 Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

All ingredients are listed.

**15.9 European Inventory of Existing Commercial Chemical Substances (EINECS),
European List of Notified chemical Substances (ELINCS), and No Longer Polymers (NLP)**

All ingredients are listed.

SECTION 16: Other Information

16.1 Full Text of Relevant R-, H- and EUH- Codes:

Xi R36/37/38	Irritating to eyes, respiratory system and skin
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
EUH	To avoid risks to human health and the environment, comply with the instructions (specifications) for use.

16.2 Classification and labeling HMIS and NFPA Label Ratings

Both systems have three color-coded fields [flammability (red), health (blue), and reactivity (yellow)] to indicate the type of hazard associated with this chemical.

Both use a system of five numbers, ranging from 0 to 4, to indicate the severity of hazard, with 0 being the least and 4 being the most hazardous.

Hazard Classification: (glycerol)

Health (blue), -- 2

Flammability (red)—0

Reactivity (yellow),--

16.3 Disclaimer

The information provided on the SDS is the most accurate information to the best knowledge of CELLSCRIPT, LLC. at this time. The information provided within serves the purpose of guidance for safe handling, use, processing storage, transportation, disposal, and release. This document should not be considered as a warranty or quality specification. The information relates only to the specific material designated and is not valid when used in combination with other materials or within a process. CELLSCRIPT, LLC. assumes no liability for damage resulting from handling or contact with this product.

16.4 Document Revision

Last Revision Date: 20NOV2019

Safety Data Sheet

Classification in accordance with Global Harmonizing System (GHS)

Note: This product is deemed non-hazardous

SECTION 1: Identification of The Substance/Mixture and of the Company Undertaking

1.1 Product Identifier

Product Name 10X Cap-Clip™ Acid Pyrophosphatase Reaction Buffer
Product Number Part of C-CC15011H

1.2 Recommended Use and Restrictions on Use

Enzyme reaction buffer. Avoid concentration of components by evaporation. This product is for research and development use only.

1.3 Details of the Supplier of the Safety Data Sheet

Company	CELLSCRIPT™, LLC.
Address	726 Post Road
City, State, Zip Code	Madison, WI 53713
Country	USA
Telephone Number	888-826-5586
Email Address	customerservice@cellscript.com
Emergency Telephone Number	1-608-442-6484 Monday to Friday 9am-5pm CST

SECTION 2: Hazard(s) Identification

2.1 Classification of the Substance or Mixture

This product with the given component concentrations is not considered hazardous.

2.2 Hazards not otherwise classified: This product as provided is not considered hazardous.

SECTION 3: Composition / Information on Ingredients

3.1 Components of Substance or Mixture

Chemical name	Formula	CAS number	EC number	Concentration
Sodium Acetate	CH ₃ COONa	127-09-3	204-823-8	0.5M
Ethylenediaminetetraacetic acid (EDTA)	C ₁₀ H ₁₆ N ₂ O ₈	60-00-4	200-449-4	10 mM
Triton X-100	C ₁₄ H ₂₂ O(C ₂ H ₄ O) _n (n=9-10)	9002-93-1		0.01%
2-mercaptoethanol	HSCH ₂ CH ₂ OH	60-24-2	200-464-6	1%

Impurities: Not known.

SECTION 4: First Aid Measures

4.1 Description of first aid measures

Eye: Eye irritation: Remove contact lenses, hold eye lids open and flush eye with plenty of water (or buffered saline eye wash) for at least 15 minutes. Check pH of tears with indicator paper and continue flushing, if necessary. If eye irritation occurs, get medical advice/attention.

Skin: Skin irritation: Remove contaminated clothing and wash before reuse. Gently wash the contaminated area with plenty of soap and water for at least 15 minutes. If skin irritation or rash develops, get medical advice/attention.

Inhalation: Nasal/lung irritation: Move person to fresh air. If not breathing clear airway and start cardiopulmonary resuscitation (CPR), avoid mouth-to-mouth; give artificial respiration and get medical attention. If respiratory irritation, dizziness, nausea occurs, get medical advice/attention.

Ingestion: Internal (mouth, throat, stomach, etc.) irritation: Rinse mouth with water. Do not induce vomiting. If feeling unwell, get medical advice/attention.

4.2 Most important symptoms and effects

ACUTE No data available

CHRONIC Not available

SECTION 5: Fire Fighting Measures

Suitable extinguishing media:	Use water spray alcohol resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media:	None
Special hazards arising from mixture:	No Data Available.
Advice for firefighters:	Wear self-contained breathing apparatus while extinguishing the fire. Avoid concentration to solids by evaporation.

SECTION 6: Accidental Release Measures

6.1 Personal precautions and protective equipment (PPE) and emergency procedures.

Personal precautions and protective equipment (PPE):

Depending on the extent of release, consider the need for trained firefighters/ emergency responders with adequate PPE for cleaning up. Keep unnecessary people away. Wear proper PPE.

Environmental precautions:

Prevent spills from entering storm sewers, drains or waterways. Prevent release to the environment.

Methods and material for containment and cleaning up.

How to contain spill:	Absorb onto combustible material (sawdust or absorbent paper).
Cleaning-up methods:	Shovel/sweep up debris and store in a sealed plastic container. Discard in trash slated only for incineration.

Additional information pertaining to the spill: Bulk materials and spill debris (> 10 ml) should be disposed of as hazardous waste.

Reference to other sections: See section 8 for further information on protective clothing and equipment, see section 13 for advice on waste disposal.

SECTION 7: Handling and Storage

7.1 Safe handling

Precautions for safe handling:	Do not get in eyes or on skin, breathe vapors or mists. Ensure good ventilation.
General hygiene advice:	Use good industrial hygiene and safety practices. Wash hands before breaks, in use, and at the end of the workday.
Measures to prevent fire:	Not available
Measures to prevent aerosol/dust generation:	Not available
Measures to protect the environment:	Not available

7.2 Conditions for safe storage, including any incompatibilities.

Technical measures and storage conditions:	Store at -20°C in a freezer without a defrost cycle. Do not store at -70°C.
Packaging materials:	Store in original container.
Requirements for storage rooms and vessels:	Not available
Specific end use(s):	Avoid concentration of liquid.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

This product, as supplied, does not contain any hazardous substances with occupational exposure limits established by OSHA.

8.2 Engineering controls

Safety shower and eye wash station.

8.3 Personal protection equipment

Eye/face protection:	Safety glasses with side shields or goggles approved by government standards such as NIOSH (US), CEN (EU) and WHMIS (CA).
Skin/body protection:	Wear lab coat
Hand protection:	Latex, nitrile or rubber gloves
Respiratory protection:	Use in a well-ventilated area.

8.4 Thermal hazards

Keep open vial at/between 4°C and room temperature.

8.5 General health & safety measures

Use clean laboratory practices and personal protection equipment

8.6 Environmental exposure controls

Triple rinse product (polypropylene) containers with water before recycling.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Appearance/color	Clear
Odor:	Slight Repulsive odor
Odor threshold:	None
pH:	pH 6
Melting point/freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash Point:	Not available
Evaporation rate:	Not available
Flammability:	Not available
Lower flammability/explosive limit:	None
Upper flammability/explosive limit:	None
Vapor pressure:	Not available
Vapor density:	Not available
Relative density:	Not available
Solubility:	Water soluble
Partition coefficient: n-octanol/water:	Unknown
Auto-ignition temperature:	Unknown
Decomposition temperature:	Unknown
Viscosity:	Unknown
Explosive properties:	None
Oxidizing properties:	None
Other information:	Not available

SECTION 10: Stability and Reactivity

Chemical stability:	Avoid concentration of liquid.
Possibility of hazardous reactions:	None known
Conditions to avoid:	Avoid concentration of liquid mixture to solids.
Incompatible materials:	Nitric acid, perchloric acid.
Hazardous decomposition products:	Carbon oxides and nitrous oxides.

SECTION 11: Toxicological Information

Likely routes of exposure: Inhalation; ingestion, eye and skin contact.

11.1 Acute effects

Eye: Redness and soreness.
Skin: Redness, rash, burning, dry, and itching skin.
Inhalation: Nasal irritation, headache, cough, shortness of breath.
Ingestion: Malaise, dizziness, and nausea, gastrointestinal burns.
Toxicity: Not available.

Skin corrosion/irritation: Mild
Serious eye damage/irritation: Mild
Respiratory or skin sensitization: Mild
STOT-single exposure: Not available
Chronic health effects: Not available
Carcinogenicity: Not available
Germ cell mutagenicity: Not available
Reproductive toxicity: Not available
Developmental: Not available
Fertility: Not available
STOT-repeated exposure: Not available
Aspiration hazard: Not available.
Other information: None

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

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

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

SECTION 12: Ecological Information

12.1 Ecotoxicity

Acute toxicity: Not available
Chronic toxicity: Not available
Eco/aquatic toxicity: Not available

12.2 Persistence and Degradability

Abiotic degradation:	Not available
Physical- and photo-chemical elimination:	Not available
Biodegradation:	Not available
Bioaccumulative potential:	Not available

12.3 Biological oxygen demand

Theoretical oxygen demand at 10 ppm:	Not available
Chemical oxygen demand at 10 ppm:	Not available
Biological oxygen demand-5 at 10 ppm:	Not available

12.4 Known or predicted distribution to environmental compartments

Surface tension:	Not available
Absorption/desorption:	Not available
Mobility in soil:	Not available

12.5 Results of PBT and vPvB assessment.

PBT results:	Not available
PvB results:	Not available

12.6 Other adverse effects

Additional information:	None
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SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Product/package disposal:	Dispose of material in accordance with all federal, state, and local regulations. Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by chemical incinerator.
Waste codes/waste designations according to LoW:	Unknown
Waste treatment-relevant information:	Dispose of material in accordance with all federal, state, and local regulations.
Sewage disposal-relevant information:	Prevent material from entering drains, sewer and waterways.
Other disposal recommendations:	None

SECTION 14: Transport Information

This product is classified as not hazardous and is not regulated by US Department of Transportation (DOT), ADR/RID (cross border) IMDG and IATA/ICAO.

UN number:	Not classified
UN proper shipping name:	Not classified
Transport hazard class(es):	Not classified
Packing group:	Not classified
Environmental hazards:	Not available
Special precautions for user:	Do not transport until safety precautions have been read and understood.

SECTION 15: Regulatory Information

15.1 Occupational Safety and health Administration (OSHA) Hazards

Not listed

15.2 CERLA

This product, as provided, does not contain any substances regulated as hazardous under the Comprehensive Environmental Response Compensation and Liability Act (CERLA) or the Superfund Amendments and Reauthorization Act (SARA). There may be specific reporting requirements at the local, regional, or state level.

15.3 Massachusetts Right-To-Know Substance List

15.4 Pennsylvania Right-To-Know hazardous Substances

15.5 New Jersey Worker and Community Right-To-Know components

2-mercaptoethanol (CAS# 60-24-2): Present in this mixture

Ethylenediaminetetraacetic acid (CAS# 60-00-4): Present in this mixture

15.7 California Proposition 65

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

15.8 United States of America Toxic Substances Control Act (TSCA) List

All ingredients are listed in the TSCA inventory.

15.9 Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

All ingredients are listed.

15.10 European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified chemical Substances (ELINCS), and No Longer Polymers (NLP)

All ingredients are listed.

SECTION 16: Other Information

16.1 Disclaimer

The information provided on the SDS is the most accurate information to the best knowledge of CELLSCRIPT, LLC. at this time. The information provided within serves the purpose of guidance for safe handling, use, processing storage, transportation, disposal, and release. This document should not be considered as a warranty or quality specification. The information relates only to the specific material designated and is not valid when used in combination with other materials or within a process. CELLSCRIPT, LLC. assumes no liability for damage resulting from handling or contact with this product.

16.2 Document Revision

Last Revision Date: 20NOV2019