

# **SECTION 1:** Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

Product name: Universal qPCR Master Mix

Kit Name: Hop Stunt Viroid

Company/undertaking identification

Manufacturer/Supplier: Bioingentech Ltd. Address: Bernardo O'Higgins 1213. Concepción, Chile. Phone: (56)-41-2790435

#### **SECTION 2:** Hazards identification

**HMIS GHS - Classification Principle Routes of Exposure** Specific effects Signal Word None Potential Health Effects Carcinogenic effects None. Health 0 Health hazards Not classified eyes: May cause eye irritation with susceptible persons. **Mutagenic effects** None. **Flammability** 0 Physical hazards Not classified Skin: May cause skin irritation in susceptible persons. Reproductive toxicity None. Reactivity 0 **Inhalation:** May be harmful by inhalation. Hazard Statements Not Applicable Sensitization None.

Precautionary Not Applicable Ingestion: May be harmful if swallowed. Target Organ Effects None under normal statements

## **SECTION 3:** Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 ( 10-30 )	56-81-5	200-289-5	1 0-30

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

#### **SECTION 4:** First aid measures

Skin contact Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed Not Applicable

Notes to Physician Treat symptomatically.

#### **SECTION 5:** Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical Not known

#### **SECTION 6:** Accidental release measures

ental release measures

Use personal protection equipment.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. See Section 12 for more information.

## **SECTION 7:** Handling and storage

Handling Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.

**Storage** Keep in a dry, cool and well-ventilated place.

# **SECTION 8:** Exposure controls/personal protection

#### **Exposure Limits**

Personal precautions

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to

the risk assessment for each laboratory where this material may be used.

Respiratory protection In case of insufficient ventilation, wear suitable Skin and Body Protection Lightweight protective clothing.

respiratory equipment. Hygiene measures Handle in accordance with good industrial

Hand protection Impervious gloves. hygiene and safety practice.

**Eye protection** Wear safety glasses with side shields (or goggles).

Environmental exposure controls No special environmental precautions required.

# **SECTION 9:** Physical and chemical properties

#### General information

°C >100 °F >212 Form Boiling point / boiling range **Appearance** No information available Melting point / melting range °C >0 °F >32 °C >90 °F >160 No data available flash point Odor **Odor Threshold** No data available °C No data available °F No data available **Autoignition Temperature** 

**Evaporation rate** No data available Partition coefficient No data available n-octanol/water

Flammability (solid, gas) No data available

**Oxidizing properties** No information available Vapor Pressure No data available Water solubility soluble No data available soluble vapor density Upper explosion limit No data available Viscosity No data available

Lower explosion limit No data available pH value 6-8

**SECTION 10:** Stability and reactivity

Stability Stable under normal conditions. Hazardous decomposition Carbon oxides.

Materials to avoid Strong acids and oxidizing agents. products

Acetic anhydride. Isocyanates. Ammonia. Bases. polymerization Hazardous polymerization does not occur.

Hazardous reaction has not been reported Conditions to avoid None under normal processing. Possibility of hazardous reactions

# **SECTION 11:** Toxicological information

#### **Acute Toxicity**

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)	
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m³ (Rat)	

#### Principle Routes of Exposure Potential Health Effects

May cause eye irritation with susceptible persons. **Mutagenic effects** None. May cause skin irritation in susceptible persons. Reproductive toxicity Skin None. Inhalation May be harmful by inhalation. Sensitization None.

Ingestion May be harmful if swallowed. **Target Organ Effects** None under normal use conditions

Carcinogenic effects None.

## **SECTION 12:** Ecological information

**Ecotoxicity** Contains no substances known to be hazardous Chronic aquatic toxicity Not classified chronic.

EC50>500 mg/L (24h)

to the environment or not degradable in waste Log Pow. Mobility

water treatment plants. Biodegradation Inherently biodegradable. Acute aquatic toxicity Not classified for acute. Bioaccumulation Material does not bioaccumulate.

**Chemical Name** Freshwater Algae Data Water Flea Data Freshwater Fish Species Data Microtox Data log Pow Glycerol Daphnia magna logPow-1.76

# **SECTION 13:** Disposal considerations

Dispose of contents/containers in accordance with local regulations.

## **SECTION 14:** Transport information

#### IATA

**Proper Shipping Name** No dangerous good in sense of these transport regulations Packing group None **Hazard Class** UN-No None Subsidiary class None **Environmental hazards** None

# **SECTION 15:** Regulatory information

Component	US TSCA
Glycerol 56-81-5 ( 10-30 )	Listed

#### **US State Regulations**

California Proposition 65

This product does not contain any Proposition 65 chemicals.

# **US Federal Regulations**

**SARA 313** 

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61) This product does not contains HAPs.

#### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### **SECTION 16:** Other information

**Reason for revision** SDS sections updated.

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

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"



Reactivity

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# **SECTION 1:** Identification of the substance/mixture and of the company/undertaking

#### Identification of the substance or mixture

Product name: Primer. Probes and Internal Control Mix

Kit Name: Hop Stunt Viroid

Physical hazards

Company/undertaking identification

Manufacturer/Supplier: Bioingentech Ltd. Address: Bernardo O'Higgins 1213. Concepción, Chile. Phone: (56)-41-2790435

Reproductive toxicity

None.

#### **SECTION 2:** Hazards identification

Not classified

**HMIS GHS - Classification Principle Routes of Exposure** Specific effects Signal Word None **Potential Health Effects** Carcinogenic effects None. Health Health hazards Not classified eyes: May cause eye irritation with susceptible persons. Mutagenic effects **Flammability** None

May cause skin irritation in susceptible persons. Inhalation: May be harmful by inhalation. Hazard Statements Not Applicable Sensitization None.

**Target Organ Effects Precautionary** Not Applicable **Ingestion:** May be harmful if swallowed. None under normal **Statements** use conditions.

## **SECTION 3:** Composition/information on ingredients

Skin:

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 ( 10-30 )	56-81-5	200-289-5	10-30

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

#### **SECTION 4:** First aid measures

Skin contact Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Eye contact

Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice. Ingestion

inhalation Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed Not Applicable

Notes to Physician Treat symptomatically.

#### **SECTION 5:** Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical. Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical Not known

#### **SECTION 6:** Accidental release measures **Environmental precautions**

Personal precautions Use personal protection equipment. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. See Section 12 for more information.

#### **SECTION 7:** Handling and storage

Always wear reccommended Personal Protective Equipment. No special handling advices are necessary. Handling

Keep in a dry, cool and well-ventilated place. Storage

# **SECTION 8:** Exposure controls/personal protection

#### **Exposure Limits**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to

the risk assessment for each laboratory where this material may be used.

In case of insufficient ventilation, wear suitable Respiratory protection Skin and Body Protection Lightweight protective clothing.

Handle in accordance with good industrial respiratory equipment. Hygiene measures

Hand protection Impervious gloves. hygiene and safety practice.

Eve protection Wear safety glasses with side shields (or goggles).

Environmental exposure controls No special environmental precautions required.

# **SECTION 9:** Physical and chemical properties

#### General information

Form	Liquid	Boiling point / boiling range	°C >100	°F >212
Appearance	No information available	Melting point / melting range	°C >0	°F >32
Odor	No data available	flash point	°C >90	°F >160
Odor Threshold	No data available	Autoignition Temperature	°C No data available	°F No data available

**Evaporation rate** No data available **Partition coefficient** No data available

Flammability (solid, gas)

No data available

n-octanol/water

Oxidizing propertiesNo information availableVapor PressureNo data availableWater solubility solublesolublevapor densityNo data availableUpper explosion limitNo data availableViscosityNo data available

Lower explosion limit No data available pH value 6-8

**SECTION 10:** Stability and reactivity

Stability Stable under normal conditions. Hazardous decomposition Carbon oxides.

Materials to avoid Strong acids and oxidizing agents. products

Acetic anhydride. Isocyanates. Ammonia. Bases. **polymerization** Hazardous polymerization does not occur.

Possibility of hazardous reactions Hazardous reaction has not been reported Conditions to avoid None under normal processing.

## **SECTION 11:** Toxicological information

#### **Acute Toxicity**

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m³ (Rat)

# Principle Routes of Exposure Potential Health Effects

eyesMay cause eye irritation with susceptible persons.Mutagenic effectsNone.SkinMay cause skin irritation in susceptible persons.Reproductive toxicityNone.InhalationMay be harmful by inhalation.SensitizationNone.

Ingestion May be harmful if swallowed. Target Organ Effects None under normal use conditions

Carcinogenic effects None.

## **SECTION 12:** Ecological information

**Ecotoxicity** Contains no substances known to be hazardous **Chronic aquatic toxicity** Not classified chronic.

to the environment or not degradable in waste Mobility Log Pow.

water treatment plants. Biodegradation Inherently biodegradable.

Acute aquatic toxicity Not classified for acute. Bioaccumulation Material does not bioaccumulate.

Chemical Name Freshwater Algae Data Water Flea Data Freshwater Fish Species Data Microtox Data log Pow

Glycerol Daphnia magna
EC50>500 mg/L (24h) logPow-1.76

# **SECTION 13:** Disposal considerations

Dispose of contents/containers in accordance with local regulations.

#### **SECTION 14:** Transport information

#### IATA

Proper Shipping NameNo dangerous good in sense of these transport regulationsPacking groupNoneHazard ClassNoneUN-NoNoneSubsidiary classNoneEnvironmental hazardsNone

# **SECTION 15:** Regulatory information

Component	US TSCA	U.
Glycerol 56-81-5 ( 10-30 )	Listed	SA Thi

#### **US State Regulations**

**California Proposition 65** 

This product does not contain any Proposition 65 chemicals.

# **US Federal Regulations**

**SARA 313** 

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

#### **WHMIS Hazard Class**

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### **SECTION 16:** Other information

**Reason for revision** SDS sections updated.

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**HMIS** 

# **SECTION 1:** Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

Product name: One gRTPCR Enzyme Mix

Kit Name: Hop Stunt Viroid

Company/undertaking identification

Manufacturer/Supplier: Bioingentech Ltd. Address: Bernardo O'Higgins 1213. Concepción, Chile. Phone: (56)-41-2790435

#### **SECTION 2:** Hazards identification

**GHS - Classification Principle Routes of Exposure** Specific effects Signal Word None Potential Health Effects Carcinogenic effects None.

Health 0 Health hazards Not classified eyes: May cause eye irritation with susceptible persons. Mutagenic effects Flammability 0 None Physical hazards Not classified Skin: May cause skin irritation in susceptible persons. Reproductive toxicity None. Reactivity 0 Sensitization

Inhalation: May be harmful by inhalation. Hazard Statements Not Applicable None.

**Target Organ Effects Precautionary** Not Applicable **Ingestion:** May be harmful if swallowed. None under normal **Statements** use conditions.

# **SECTION 3:** Composition/information on ingredients

	Component	CAS-No	EINECS-No	Weight %	
ſ	Glycerol 56-81-5 ( 10-30 )	56-81-5	200-289-5	10-30	

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

## **SECTION 4:** First aid measures

Skin contact Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Eye contact

Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice. Ingestion

inhalation Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed Not Applicable

Notes to Physician Treat symptomatically.

#### **SECTION 5:** Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical. Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical Not known

#### **SECTION 6:** Accidental release measures **Environmental precautions**

Personal precautions Use personal protection equipment. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. See Section 12 for more information.

#### **SECTION 7:** Handling and storage

Always wear reccommended Personal Protective Equipment. No special handling advices are necessary. Handling

Keep in a dry, cool and well-ventilated place. Storage

# **SECTION 8:** Exposure controls/personal protection

#### **Exposure Limits**

STEL)

Personal Protective Equipment Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to

the risk assessment for each laboratory where this material may be used.

In case of insufficient ventilation, wear suitable Respiratory protection Skin and Body Protection Lightweight protective clothing.

> respiratory equipment. Hygiene measures Handle in accordance with good industrial

Hand protection Impervious gloves. hygiene and safety practice.

Wear safety glasses with side shields (or goggles). Eye protection

Environmental exposure controls No special environmental precautions required.

# **SECTION 9:** Physical and chemical properties

#### General information

Form	Liquid	Boiling point / boiling range	°C >100	°F >212
Appearance	No information available	Melting point / melting range	°C >0	°F >32
Odor	No data available	flash point	°C >90	°F >160
Odor Threshold	No data available	Autoignition Temperature	°C No data available	°F No data available

**Evaporation rate** No data available Partition coefficient No data available

Flammability (solid, gas) No data available n-octanol/water

**Oxidizing properties** No information available Vapor Pressure No data available No data available Water solubility soluble soluble vapor density Upper explosion limit No data available Viscosity No data available

Lower explosion limit No data available pH value 6-8

**SECTION 10:** Stability and reactivity

Stability Stable under normal conditions. Hazardous decomposition Carbon oxides.

Materials to avoid Strong acids and oxidizing agents. products

Acetic anhydride. Isocyanates. Ammonia. Bases. polymerization Hazardous polymerization does not occur.

Hazardous reaction has not been reported Conditions to avoid None under normal processing. Possibility of hazardous reactions

## **SECTION 11:** Toxicological information

#### **Acute Toxicity**

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m³ (Rat)

#### Principle Routes of Exposure Potential Health Effects

May cause eye irritation with susceptible persons. **Mutagenic effects** None. May cause skin irritation in susceptible persons. Reproductive toxicity Skin None. Inhalation May be harmful by inhalation. Sensitization None.

Ingestion May be harmful if swallowed. **Target Organ Effects** None under normal use conditions

Carcinogenic effects None.

## **SECTION 12:** Ecological information

**Ecotoxicity** Contains no substances known to be hazardous Chronic aquatic toxicity Not classified chronic.

> to the environment or not degradable in waste Mobility Log Pow.

water treatment plants. Biodegradation Inherently biodegradable. Acute aquatic toxicity Not classified for acute. Bioaccumulation Material does not bioaccumulate.

Water Flea Data **Microtox Data Chemical Name** Freshwater Algae Data Freshwater Fish Species Data log Pow Glycerol Daphnia magna logPow-1.76 EC50>500 mg/L (24h)

## **SECTION 13:** Disposal considerations

Dispose of contents/containers in accordance with local regulations.

#### **SECTION 14:** Transport information

#### IATA

**Proper Shipping Name** No dangerous good in sense of these transport regulations Packing group None **Hazard Class UN-No** None Subsidiary class None **Environmental hazards** None

# **SECTION 15:** Regulatory information

Component		US TSCA	
Glycerol 56-81-5 ( 10-	30)	Listed	

#### **US State Regulations**

California Proposition 65

This product does not contain any Proposition 65 chemicals.

# **US Federal Regulations**

**SARA 313** 

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

#### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### **SECTION 16:** Other information

**Reason for revision** SDS sections updated.

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# **SECTION 1:** Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

**Product name:** HSVd Positive Control **Kit Name:** Hop Stunt Viroid

Company/undertaking identification

Manufacturer/Supplier: Bioingentech Ltd. Address: Bernardo O'Higgins 1213. Concepción, Chile. Phone: (56)-41-2790435

#### **SECTION 2:** Hazards identification

**HMIS Principle Routes of Exposure** Specific effects GHS - Classification Signal Word None **Potential Health Effects** Carcinogenic effects None. Health 0 Health hazards Not classified May cause eye irritation with susceptible persons. **Mutagenic effects** Flammability 0 eves: None Physical hazards Not classified Skin: May cause skin irritation in susceptible persons. Reproductive toxicity Reactivity 0 None. Hazard Statements Not Applicable **Inhalation:** May be harmful by inhalation. Sensitization None.

Precautionary Not Applicable Ingestion: May be harmful if swallowed.

Statements

Target Organ Effects

None under normal use conditions.

## **SECTION 3:** Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 ( 10-30 )	56-81-5	200-289-5	1 0-30

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

## **SECTION 4:** First aid measures

Skin contact Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed Not Applicable

Notes to Physician Treat symptomatically.

#### **SECTION 5:** Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical Not known

#### **SECTION 6:** Accidental release measures

ental release measures

Use personal protection equipment.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. See Section 12 for more information.

## **SECTION 7:** Handling and storage

Handling Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.

**Storage** Keep in a dry, cool and well-ventilated place.

# **SECTION 8:** Exposure controls/personal protection

### **Exposure Limits**

Personal precautions

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

Personal Protective Equipment Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to

the risk assessment for each laboratory where this material may be used.

Respiratory protection In case of insufficient ventilation, wear suitable Skin and Body Protection Lightweight protective clothing.

respiratory equipment. Hygiene measures Handle in accordance with good industrial

Hand protection Impervious gloves. hygiene and safety practice.

**Eye protection** Wear safety glasses with side shields (or goggles).

Environmental exposure controls No special environmental precautions required.

# **SECTION 9:** Physical and chemical properties

#### General information

°C >100 °F >212 Form Boiling point / boiling range °C >0 **Appearance** No information available Melting point / melting range °F >32 °C >90 °F >160 Odor No data available flash point No data available °C No data available °F No data available Odor Threshold **Autoignition Temperature** 

**Evaporation rate** No data available Partition coefficient No data available n-octanol/water

Flammability (solid, gas) No data available

**Oxidizing properties** No information available Vapor Pressure No data available No data available Water solubility soluble soluble vapor density Upper explosion limit No data available Viscosity No data available

Lower explosion limit No data available pH value 6-8

**SECTION 10:** Stability and reactivity

Stability Stable under normal conditions. Hazardous decomposition Carbon oxides.

Materials to avoid Strong acids and oxidizing agents. products

Acetic anhydride. Isocyanates. Ammonia. Bases. polymerization Hazardous polymerization does not occur.

Hazardous reaction has not been reported Conditions to avoid None under normal processing. Possibility of hazardous reactions

# **SECTION 11:** Toxicological information

#### **Acute Toxicity**

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m³ (Rat)

# Principle Routes of Exposure Potential Health Effects

eyes May cause eye irritation with susceptible persons. **Mutagenic effects** None. May cause skin irritation in susceptible persons. Reproductive toxicity Skin None. Inhalation May be harmful by inhalation. Sensitization None.

Ingestion May be harmful if swallowed. **Target Organ Effects** None under normal use conditions

Carcinogenic effects None.

## **SECTION 12:** Ecological information

**Ecotoxicity** Contains no substances known to be hazardous Chronic aquatic toxicity Not classified chronic.

> to the environment or not degradable in waste Mobility Log Pow.

water treatment plants. Biodegradation Inherently biodegradable. Acute aquatic toxicity Not classified for acute. Bioaccumulation Material does not bioaccumulate.

**Chemical Name** Freshwater Algae Data Water Flea Data Freshwater Fish Species Data Microtox Data log Pow Glycerol Daphnia magna logPow-1.76 EC50>500 mg/L (24h)

## **SECTION 13:** Disposal considerations

Dispose of contents/containers in accordance with local regulations.

#### **SECTION 14:** Transport information

#### IATA

**Proper Shipping Name** No dangerous good in sense of these transport regulations Packing group None **Hazard Class** UN-No None **Subsidiary class** None **Environmental hazards** None

# **SECTION 15:** Regulatory information

Component	US TSCA	US Federal Regu
Glycerol 56-81-5 ( 10-30 )	Listed	SARA 313 This product is not requ

# **US State Regulations**

California Proposition 65

This product does not contain any Proposition 65 chemicals.

# ulations

gulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61) This product does not contains HAPs.

#### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### **SECTION 16:** Other information

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**HMIS** 

Health

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# **SECTION 1:** Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

**Product name:** HSVd Negative Control **Kit Name:** Hop Stunt Viroid

Company/undertaking identification

Manufacturer/Supplier: Bioingentech Ltd. Address: Bernardo O'Higgins 1213. Concepción, Chile. Phone: (56)-41-2790435

#### **SECTION 2:** Hazards identification

GHS - Classification Principle Routes of Exposure Signal Word None Potential Health Effects Carcinogenic effects None.

Health hazards Not classified May cause eye irritation with susceptible persons. **Mutagenic effects Flammability** eves: None. Physical hazards Not classified Skin: May cause skin irritation in susceptible persons. Reproductive toxicity Reactivity None. Hazard Statements Not Applicable Inhalation: May be harmful by inhalation. Sensitization None.

Precautionary Not Applicable Ingestion: May be harmful if swallowed.

Statements

Not Applicable Ingestion: May be harmful if swallowed.

Target Organ Effects

None under normal use conditions.

**SECTION 3:** Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 ( 10-30 )	56-81-5	200-289-5	1 0-30

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

#### **SECTION 4:** First aid measures

Skin contact Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

**Ingestion**Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed Not Applicable

Notes to Physician Treat symptomatically.

## **SECTION 5:** Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical Not known

#### **SECTION 6:** Accidental release measures Environmental precautions

Personal precautions Use personal protection equipment. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. See Section 12 for more information.

#### **SECTION 7:** Handling and storage

Handling Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.

**Storage** Keep in a dry, cool and well-ventilated place.

# **SECTION 8:** Exposure controls/personal protection

#### **Exposure Limits**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to

the risk assessment for each laboratory where this material may be used.

Respiratory protection In case of insufficient ventilation, wear suitable Skin and Body Protection Lightweight protective clothing.

respiratory equipment. Hygiene measures Handle in accordance with good industrial

Hand protection Impervious gloves. hygiene and safety practice.

**Eye protection** Wear safety glasses with side shields (or goggles).

Environmental exposure controls No special environmental precautions required.

# **SECTION 9:** Physical and chemical properties

#### General information

Form °C >100 °F >212 Boiling point / boiling range °C >0 **Appearance** No information available Melting point / melting range °F >32 °C >90 Odor No data available flash point °F >160 **Autoignition Temperature** No data available °C No data available Odor Threshold °F No data available

**Evaporation rate** No data available **Partition coefficient** No data available

Flammability (solid, gas) No data available n-octanol/water

Oxidizing propertiesNo information availableVapor PressureNo data availableWater solubility solublesolublevapor densityNo data availableUpper explosion limitNo data availableViscosityNo data available

Lower explosion limit No data available pH value 6-8

**SECTION 10:** Stability and reactivity

Stability Stable under normal conditions. Hazardous decomposition Carbon oxides.

Materials to avoid Strong acids and oxidizing agents. products

Acetic anhydride. Isocyanates. Ammonia. Bases. **polymerization** Hazardous polymerization does not occur.

Possibility of hazardous reactions Hazardous reaction has not been reported Conditions to avoid None under normal processing.

# **SECTION 11:** Toxicological information

#### **Acute Toxicity**

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m³ (Rat)

#### Principle Routes of Exposure Potential Health Effects

eyesMay cause eye irritation with susceptible persons.Mutagenic effectsNone.SkinMay cause skin irritation in susceptible persons.Reproductive toxicityNone.InhalationMay be harmful by inhalation.SensitizationNone.

Ingestion May be harmful if swallowed. Target Organ Effects None under normal use conditions

Carcinogenic effects None.

## **SECTION 12:** Ecological information

Ecotoxicity Contains no substances known to be hazardous Chronic aquatic toxicity Not classified chronic.

to the environment or not degradable in waste **Mobility** Log Pow.

water treatment plants. Biodegradation Inherently biodegradable.

Acute aquatic toxicity Not classified for acute. Bioaccumulation Material does not bioaccumulate.

Chemical Name Freshwater Algae Data Water Flea Data Freshwater Fish Species Data Microtox Data log Pow

Glycerol Daphnia magna
EC50>500 mg/L (24h) logPow-1.76

# **SECTION 13:** Disposal considerations

Dispose of contents/containers in accordance with local regulations.

#### **SECTION 14:** Transport information

#### IATA

Proper Shipping NameNo dangerous good in sense of these transport regulationsPacking groupNoneHazard ClassNoneUN-NoNoneSubsidiary classNoneEnvironmental hazardsNone

# **SECTION 15:** Regulatory information

Component	US TSCA	US Federal F
Glycerol 56-81-5 ( 10-30 )	Listed	SARA 313 This product is no

# **US State Regulations**

**California Proposition 65** 

This product does not contain any Proposition 65 chemicals.

#### **US Federal Regulations**

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

#### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### **SECTION 16:** Other information

**Reason for revision** SDS sections updated.

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

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"



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# **SECTION 1:** Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

**Product name:** PCR grade Water **Kit Name:** Hop Stunt Viroid

Company/undertaking identification

Manufacturer/Supplier: Bioingentech Ltd. Address: Bernardo O'Higgins 1213. Concepción, Chile. Phone: (56)-41-2790435

#### **SECTION 2:** Hazards identification

GHS - ClassificationPrinciple Routes of ExposureSpecific effectsHMISSignal WordNonePotential Health EffectsCarcinogenic effectsNone.Health

Health hazards Not classified May cause eye irritation with susceptible persons. **Mutagenic effects Flammability** eves: None Physical hazards Not classified Skin: May cause skin irritation in susceptible persons. Reproductive toxicity Reactivity None. Hazard Statements Not Applicable **Inhalation:** May be harmful by inhalation. Sensitization None.

Precautionary Not Applicable Ingestion: May be harmful if swallowed.

Statements

Target Organ Effects
None under normal use conditions.

**SECTION 3:** Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 ( 10-30 )	56-81-5	200-289-5	1 0-30

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

#### **SECTION 4:** First aid measures

Skin contact Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed Not Applicable

Notes to Physician Treat symptomatically.

## **SECTION 5:** Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical Not known

#### **SECTION 6:** Accidental release measures Environmental precautions

Personal precautions Use personal protection equipment. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. See Section 12 for more information.

#### **SECTION 7:** Handling and storage

Handling Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.

**Storage** Keep in a dry, cool and well-ventilated place.

# **SECTION 8:** Exposure controls/personal protection

#### **Exposure Limits**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to

the risk assessment for each laboratory where this material may be used.

Respiratory protection In case of insufficient ventilation, wear suitable Skin and Body Protection Lightweight protective clothing.

respiratory equipment. Hygiene measures Handle in accordance with good industrial

Hand protection Impervious gloves. Hygiene measures hygiene and safety practice.

**Eve protection** Wear safety glasses with side shields (or goggles).

Environmental exposure controls No special environmental precautions required.

# **SECTION 9:** Physical and chemical properties

#### General information

Form	Liquid	Boiling point / boiling range	°C >100	°F >212
Appearance	No information available	Melting point / melting range	°C >0	°F >32
Odor	No data available	flash point	°C >90	°F >160
Odor Threshold	No data available	Autoignition Temperature	°C No data available	°F No data available

Partition coefficient **Evaporation rate** No data available No data available

Flammability (solid, gas) No data available n-octanol/water

**Oxidizing properties** No information available Vapor Pressure No data available Water solubility soluble soluble vapor density No data available Upper explosion limit No data available Viscosity No data available

Lower explosion limit No data available pH value 6-8

**SECTION 10:** Stability and reactivity

Stability Stable under normal conditions. Hazardous decomposition Carbon oxides.

Materials to avoid Strong acids and oxidizing agents. products

Acetic anhydride. Isocyanates. Ammonia. Bases. polymerization Hazardous polymerization does not occur.

Hazardous reaction has not been reported Conditions to avoid None under normal processing. Possibility of hazardous reactions

## **SECTION 11:** Toxicological information

#### **Acute Toxicity**

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m³ (Rat)

#### Principle Routes of Exposure Potential Health Effects

May cause eye irritation with susceptible persons. **Mutagenic effects** None. May cause skin irritation in susceptible persons. Reproductive toxicity Skin None. Inhalation May be harmful by inhalation. Sensitization None.

Ingestion May be harmful if swallowed. **Target Organ Effects** None under normal use conditions

Carcinogenic effects None.

## **SECTION 12:** Ecological information

**Ecotoxicity** Contains no substances known to be hazardous Chronic aquatic toxicity Not classified chronic.

to the environment or not degradable in waste Mobility Log Pow.

water treatment plants. Biodegradation Inherently biodegradable. Acute aquatic toxicity Not classified for acute. Bioaccumulation Material does not bioaccumulate.

**Chemical Name** Freshwater Algae Data Water Flea Data Freshwater Fish Species Data **Microtox Data** log Pow Glycerol Daphnia magna logPow-1.76 EC50>500 mg/L (24h)

# **SECTION 13:** Disposal considerations

Dispose of contents/containers in accordance with local regulations.

#### **SECTION 14:** Transport information

#### IATA

**Proper Shipping Name** No dangerous good in sense of these transport regulations Packing group None **Hazard Class UN-No** None **Subsidiary class** None **Environmental hazards** None

# **SECTION 15:** Regulatory information

Component	US TSCA	US Federal Regi
Glycerol 56-81-5 ( 10-30 )	Listed	SARA 313 This product is not requ

#### **US State Regulations**

California Proposition 65

This product does not contain any Proposition 65 chemicals.

# ıulations

egulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

#### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### **SECTION 16:** Other information

**Reason for revision** SDS sections updated.

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

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# **SECTION 1:** Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

**Product name:** Exogenous RNA control **Kit Name:** Hop Stunt Viroid

Company/undertaking identification

Manufacturer/Supplier: Bioingentech Ltd. Address: Bernardo O'Higgins 1213. Concepción, Chile. Phone: (56)-41-2790435

#### **SECTION 2:** Hazards identification

**HMIS GHS - Classification Principle Routes of Exposure** Specific effects Signal Word None **Potential Health Effects** Carcinogenic effects None. Health 0 Health hazards Not classified eyes: May cause eye irritation with susceptible persons. **Mutagenic effects** None. **Flammability** 0 Physical hazards Not classified Skin: May cause skin irritation in susceptible persons. Reproductive toxicity None. Reactivity 0 **Inhalation:** May be harmful by inhalation. Hazard Statements Not Applicable Sensitization None.

Precautionary Not Applicable Ingestion: May be harmful if swallowed.

Target Organ Effects None under normal use conditions.

## **SECTION 3:** Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 ( 10-30 )	56-81-5	200-289-5	10-30

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

### **SECTION 4:** First aid measures

Skin contact Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

**Ingestion**Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed Not Applicable

Notes to Physician Treat symptomatically.

#### **SECTION 5:** Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical Not known

#### **SECTION 6:** Accidental release measures

# ntal release measures Environmental precautions Separation and protection equipment Prevent further leakage or spillage if safe to do separations.

Personal precautions
Use personal protection equipment.

Methods for cleaning up

Use personal protection equipment.

Soak up with inert absorbent material.

Prevent further leakage or spillage if safe to do so.

See Section 12 for more information.

## **SECTION 7:** Handling and storage

Handling Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.

**Storage** Keep in a dry, cool and well-ventilated place.

# **SECTION 8:** Exposure controls/personal protection

#### **Exposure Limits**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to

the risk assessment for each laboratory where this material may be used.

Respiratory protection In case of insufficient ventilation, wear suitable Skin and Body Protection Lightweight protective clothing.

respiratory equipment. Hygiene measures Handle in accordance with good industrial

Hand protection Impervious gloves. hygiene and safety practice.

**Eye protection** Wear safety glasses with side shields (or goggles).

Environmental exposure controls No special environmental precautions required.

# **SECTION 9:** Physical and chemical properties

#### General information

°C >100 °F >212 Form Boiling point / boiling range **Appearance** No information available Melting point / melting range °C >0 °F >32 °C >90 °F >160 No data available flash point Odor **Odor Threshold** No data available °C No data available °F No data available **Autoignition Temperature** 

**Evaporation rate** No data available Partition coefficient No data available n-octanol/water

Flammability (solid, gas) No data available

**Oxidizing properties** No information available Vapor Pressure No data available Water solubility soluble No data available soluble vapor density Upper explosion limit No data available Viscosity No data available

Lower explosion limit No data available pH value 6-8

**SECTION 10:** Stability and reactivity

Stability Stable under normal conditions. Hazardous decomposition Carbon oxides.

Materials to avoid Strong acids and oxidizing agents. products

Acetic anhydride. Isocyanates. Ammonia. Bases. polymerization Hazardous polymerization does not occur.

Hazardous reaction has not been reported Conditions to avoid None under normal processing. Possibility of hazardous reactions

# **SECTION 11:** Toxicological information

#### **Acute Toxicity**

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m³ (Rat)

#### Principle Routes of Exposure Potential Health Effects

May cause eye irritation with susceptible persons. **Mutagenic effects** None. May cause skin irritation in susceptible persons. Reproductive toxicity Skin None. Inhalation May be harmful by inhalation. Sensitization None.

Ingestion May be harmful if swallowed. **Target Organ Effects** None under normal use conditions

Carcinogenic effects None.

## **SECTION 12:** Ecological information

**Ecotoxicity** Contains no substances known to be hazardous Chronic aquatic toxicity Not classified chronic.

> to the environment or not degradable in waste Mobility Log Pow.

water treatment plants. Biodegradation Inherently biodegradable.

Bioaccumulation Acute aquatic toxicity Not classified for acute. Material does not bioaccumulate.

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

# **SECTION 13:** Disposal considerations

Dispose of contents/containers in accordance with local regulations.

#### **SECTION 14:** Transport information

#### IATA

**Proper Shipping Name** No dangerous good in sense of these transport regulations Packing group None **Hazard Class** UN-No None Subsidiary class None **Environmental hazards** None

# **SECTION 15:** Regulatory information

Component	US TSCA	USF
Glycerol 56-81-5 ( 10-30 )	Listed	SARA This pr

#### **US State Regulations**

California Proposition 65

This product does not contain any Proposition 65 chemicals.

# Federal Regulations

A 313

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

#### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### **SECTION 16:** Other information

**Reason for revision** SDS sections updated.

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

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None.

None.

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Reactivity

# **SECTION 1:** Identification of the substance/mixture and of the company/undertaking

## Identification of the substance or mixture

Product name: Exogenous RNA control Primer and Probes Mix

Kit Name: Hop Stunt Viroid

Company/undertaking identification

Manufacturer/Supplier: Bioingentech Ltd. Address: Bernardo O'Higgins 1213. Concepción, Chile. Phone: (56)-41-2790435

#### **SECTION 2:** Hazards identification

**HMIS GHS - Classification Principle Routes of Exposure** Specific effects Signal Word None **Potential Health Effects** Carcinogenic effects None. Health Health hazards Not classified eyes: May cause eye irritation with susceptible persons. Mutagenic effects **Flammability** None

Physical hazardsNot classifiedSkin:May cause skin irritation in susceptible persons.Reproductive toxicityHazard StatementsNot ApplicableInhalation:May be harmful by inhalation.Sensitization

Precautionary Not Applicable Ingestion: May be harmful if swallowed. Target Organ Effects None under normal statements

# **SECTION 3:** Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 ( 10-30 )	56-81-5	200-289-5	1 0-30

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

#### **SECTION 4:** First aid measures

Skin contact Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed Not Applicable

Notes to Physician Treat symptomatically.

#### **SECTION 5:** Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical Not known

#### **SECTION 6:** Accidental release measures Environmental precautions

Personal precautions Use personal protection equipment. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. See Section 12 for more information.

#### **SECTION 7:** Handling and storage

Handling Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.

**Storage** Keep in a dry, cool and well-ventilated place.

# **SECTION 8:** Exposure controls/personal protection

#### **Exposure Limits**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to

the risk assessment for each laboratory where this material may be used.

Respiratory protection In case of insufficient ventilation, wear suitable Skin and Body Protection Lightweight protective clothing.

respiratory equipment. Hygiene measures Handle in accordance with good industrial

respiratory equipment.

Hygiene measures

Hardie in accordance with good industries

Hand protection Impervious gloves. hygiene and safety practice.

**Eye protection** Wear safety glasses with side shields (or goggles).

Environmental exposure controls No special environmental precautions required.

# **SECTION 9:** Physical and chemical properties

#### General information

Form	Liquid	Boiling point / boiling range	C >100	F >212
Appearance	No information available	Melting point / melting range	°C >0	°F >32
Odor	No data available	flash point	°C >90	°F >160
Odor Threshold	No data available	Autoignition Temperature	°C No data available	°F No data available

**Evaporation rate** No data available **Partition coefficient** No data available

Flammability (solid, gas)

No data available

n-octanol/water

Oxidizing propertiesNo information availableVapor PressureNo data availableWater solubility solublesolublevapor densityNo data availableUpper explosion limitNo data availableViscosityNo data available

Lower explosion limit No data available pH value 6-8

**SECTION 10:** Stability and reactivity

Stability Stable under normal conditions. Hazardous decomposition Carbon oxides.

Materials to avoid Strong acids and oxidizing agents. products

Acetic anhydride. Isocyanates. Ammonia. Bases. **polymerization** Hazardous polymerization does not occur.

Possibility of hazardous reactions Hazardous reaction has not been reported Conditions to avoid None under normal processing.

## **SECTION 11:** Toxicological information

#### **Acute Toxicity**

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m³ (Rat)

#### Principle Routes of Exposure Potential Health Effects

eyesMay cause eye irritation with susceptible persons.Mutagenic effectsNone.SkinMay cause skin irritation in susceptible persons.Reproductive toxicityNone.InhalationMay be harmful by inhalation.SensitizationNone.

Ingestion May be harmful if swallowed. Target Organ Effects None under normal use conditions

Carcinogenic effects None.

## **SECTION 12:** Ecological information

Ecotoxicity Contains no substances known to be hazardous Chronic aquatic toxicity Not classified chronic.

to the environment or not degradable in waste Mobility Log Pow.

water treatment plants. Biodegradation Inherently biodegradable.

Acute aquatic toxicity Not classified for acute. Bioaccumulation Material does not bioaccumulate.

Chemical Name Freshwater Algae Data Water Flea Data Freshwater Fish Species Data Microtox Data log Pow

Glycerol Daphnia magna
EC50>500 mg/L (24h)

# **SECTION 13:** Disposal considerations

Dispose of contents/containers in accordance with local regulations.

#### **SECTION 14:** Transport information

#### IATA

Proper Shipping NameNo dangerous good in sense of these transport regulationsPacking groupNoneHazard ClassNoneUN-NoNoneSubsidiary classNoneEnvironmental hazardsNone

# **SECTION 15:** Regulatory information

Component	US TSCA
Glycerol 56-81-5 ( 10-30 )	Listed

# **US State Regulations**

**California Proposition 65** 

This product does not contain any Proposition 65 chemicals.

# **US Federal Regulations**

**SARA 313** 

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

#### **WHMIS Hazard Class**

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### **SECTION 16:** Other information

**Reason for revision** SDS sections updated.

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