

# SAFETY DATA SHEET

## MycoClean™ Mycoplasma Prevention Spray

Date of issue: 2018-05-30

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Version: R0001.0001

### 1. IDENTIFICATION

#### A. Product name

- MycoClean™ Mycoplasma Prevention Spray

#### B. Recommended use and restriction on use

- General use : Laboratory chemicals  
 - Restriction on use : Not available

#### C. Manufacturer / Supplier / Distributor information

##### o Manufacturer information

- Company name : iNtRON Biotechnology, Inc.  
 - Address : #1011 Jungang Induspia V B/D, 137, Sagimakgol-ro, Jungwon-gu, Seongnam, Gyeonggi-do, 13202, Korea  
 - Dept. : MDx center  
 - Telephone number : +82-31-739-5737  
 - Emergency telephone number :  
 - Fax number : +82-31-739-5264  
 - E-mail address : intronbio@intronbio.com

##### o Supplier/Distributor information

- Company name : iNtRON Biotechnology, Inc.  
 - Address : #1011 Jungang Induspia V B/D, 137, Sagimakgol-ro, Jungwon-gu, Seongnam, Gyeonggi-do, 13202, Korea  
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### 2. HAZARD IDENTIFICATION

#### A. GHS Classification

- Flammable liquids : Category2  
 - Acute toxicity (oral) : Category4  
 - Acute toxicity (dermal) : Category4  
 - Skin corrosion/irritation : Category2  
 - Serious eye damage/irritation : Category2A  
 - Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)

#### B. GHS label elements

##### o Hazard symbols



- **Signal words**

- Danger

- **Hazard statements**

- H225 Highly flammable liquid and vapour
- H302 Harmful if swallowed
- H312 Harmful in contact with skin
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation.

- **Precautionary statements**

- 1) Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools. Flammable liquids (chapter 2.6) 1, 2, 3
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

- 2) Response**

- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment
- P330 Rinse mouth.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

- 3) Storage**

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

- 4) Disposal**

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

### C. Other hazards which do not result in classification : (NFPA Classification)

- **NFPA grade (0 ~ 4 level)**

- Health : 2, Flammability : 0, Reactivity : 0

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
1-Propanol	n-Propanol ; Propan-1-ol ; Ethyl carbinol ; 1-Hydroxypropane ; N-Propyl alcohol ; 1-Propyl alcohol ; Propylic alcohol ; Propanol-1 ;	71-23-8	20 ~50

Glutaraldehyde	Dioxopentan ; 1,3-Diformylpropane ; Glutaral ; Glutaralum ; Glutaric aldehyde ; Glutaric dialdehyde ; 1,5-Pentanedione	111-30-8	0.1 ~ 0.5
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#### 4. FIRST AID MEASURES

##### A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contact lenses if worn.

##### B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Prevent the spread of the skin.
- Wash thoroughly after handling.

##### C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.

##### D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

##### E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

##### F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

#### 5. FIREFIGHTING MEASURES

##### A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

##### B. Specific hazards arising from the chemical

- Not available

##### C. Special protective actions for firefighters

- Move containers from fire area, if you can do without the risk.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Using a unattended and water devices in case of large fire and leave alone to burn if you do not imperative.
- Keep containers cool with water spray.
- Due to the extremely low flash point, irrigating fire extinguishing may be less effective when put out a fire.

## 6. ACCIDENTAL RELEASE MEASURES

### A. Personal precautions, protective equipment and emergency procedures

- Ventilate closed spaces before entering.
- Move container to safe area from the leak area.
- Remove all sources of ignition.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Avoid skin contact and inhalation.

### B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

### C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Do not use plastic containers.

## 7. HANDLING AND STORAGE

### A. Precautions for safe handling

- Avoid direct physical contact.
- Comply with all applicable laws and regulations for handling
- Do not handle until all safety precautions have been read and understood.
- Operators should wear antistatic footwear and clothing.
- Avoid contact with heat, sparks, flame or other ignition sources.

### B. Conditions for safe storage, including any incompatibilities

- Save in cool, dry and well ventilated place.
- Do not use damaged containers.
- Save applicable laws and regulations.
- Do not apply any physical shock to container.
- Keep sealed when not in use.
- Collected them in sealed containers.
- Do not eat, drink or smoke when using this product.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### A. Exposure limits

- o **ACGIH TLV**
  - [1-Propanol] : TWA, 100 ppm (246 mg/m<sup>3</sup>)
  - [Glutaraldehyde] : Ceiling, 0.05 ppm (0.2 mg/m<sup>3</sup>), Activated or Unactivated
- o **OSHA PEL**
  - [1-Propanol]:200ppm 500mg/m<sup>3</sup>

### B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

### C. Individual protection measures, such as personal protective equipment

- o **Respiratory protection**
  - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
  - Respiratory protection is ranked in order from minimum to maximum.
  - Consider warning properties before use.
- o **Eye protection**
  - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

- Provide an emergency eye wash station and quick drench shower in the immediate work area.
- **Hand protection**
  - Wear appropriate chemical resistant glove.
- **Skin protection**
  - Wear appropriate chemical resistant protective clothing.
- **Others**
  - Not available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### [1-Propanol]

A. Appearance	
- Appearance	Liquid
- Color	Colorless
B. Odor	Alcohol odor
C. Odor threshold	30 ppm
D. pH	Not available
E. Melting point/Freezing point	-127 °C
F. Initial Boiling Point/Boiling Ranges	97 °C
G. Flash point	22.2 °C (c.c)
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	2.1 / 13.5%
K. Vapour pressure	21mmHg (25 °C)
L. Solubility	100g/100ml (25 °C)
M. Vapour density	2.1 (air=1)
N. Specific gravity(Relative density)	0.8053 (20 °C)
O. Partition coefficient of n-octanol/water	0.25
P. Autoignition temperature	371 °C
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	60.1

### [Glutaraldehyde]

A. Appearance	
- Appearance	Liquid
- Color	Colorless
B. Odor	Irritating odor
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	-33 °C
F. Initial Boiling Point/Boiling Ranges	102 °C (decomposition)
G. Flash point	95 °C (No flash point observed up to 95 °C )
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	2.3 kPa (20 °C)
L. Solubility	100 mg/l (72 °F)
M. Vapour density	3.5
N. Specific gravity(Relative density)	1.13 (20 °C)
O. Partition coefficient of n-octanol/water	-0.36 (at 23 °C, pH7 EU Method A.8)
P. Autoignition temperature	395 °C (at 1013 hPa)
Q. Decomposition temperature	Not available
R. Viscosity	12.75 (25 °C)
S. Molecular weight	100.12

## 10. STABILITY AND REACTIVITY

### A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

**B. Possibility of hazardous reactions**

- Cylinders exposed to fire may vent and release flammable gas.

**C. Conditions to avoid**

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with heat, sparks, flame or other ignition sources.

**D. Incompatible materials**

- Not available

**E. Hazardous decomposition products**

- May emit flammable vapour if involved in fire.

**11. TOXICOLOGICAL INFORMATION****A. Information on the likely routes of exposure**

- **(Respiratory tracts)**
  - May cause respiratory irritation.
- **(Oral)**
  - Harmful if swallowed
- **(Eye-Skin)**
  - Causes serious eye irritation
  - Causes skin irritation

**B. Delayed and immediate effects and also chronic effects from short and long term exposure**

- **Acute toxicity**
  - \* **Oral**
    - Product (ATEmix) : 50mg/kg < ATEmix <= 300mg/kg
    - [1-Propanol] : LD50 = 1870 mg/kg Rat (OECD Guideline 401)
    - [Glutaraldehyde] : LD50 134 mg/kg Rat
  - \* **Dermal**
    - Product (ATEmix) : 1000mg/kg < ATEmix <= 2000mg/kg
    - [1-Propanol] : LD50 4302 mg/kg Rabbit (OECD Guideline 402)
    - [Glutaraldehyde] : LD50 1100 mg/kg Rat
  - \* **Inhalation**
    - Product (ATEmix) : Not available
    - [1-Propanol] : LC50 33.8 mg/ℓ 4 hr Rat (OECD Guideline 403, GLP)
    - [Glutaraldehyde] : LC50 0.48 mg/ℓ 4 hr Rat
- **Skin corrosion/irritation**
  - Causes skin irritation
- **Serious eye damage/irritation**
  - Causes serious eye irritation
- **Respiratory sensitization**
  - Not available
- **Skin sensitization**
  - Not available
- **Carcinogenicity**
  - \* **IARC**
    - Not available
  - \* **OSHA**
    - Not available
  - \* **ACGIH**
    - [1-Propanol] : A4
    - [Glutaraldehyde] : A4
  - \* **NTP**
    - Not available

- \* **EU CLP**
  - Not available
- **Germ cell mutagenicity**
  - Not available
- **Reproductive toxicity**
  - Not available
- **STOT-single exposure**
  - May cause respiratory irritation.
- **STOT-repeated exposure**
  - Not available
- **Aspiration hazard**
  - Not available

## 12. ECOLOGICAL INFORMATION

### A. Ecotoxicity

- **Fish**
  - [1-Propanol] : LC50 4555 mg/ℓ 96 hr Pimephales promelas(OECD Guideline 203)(ECHA)
- **Crustaceans**
  - [1-Propanol] : ECHA LC50 1000 mg/ℓ 48 hr Daphnid (ECHA)
  - [Glutaraldehyde] : LC50 0.35 mg/ℓ 48 hr (SIDS (1998))
- **Algae**
  - Not available

### B. Persistence and degradability

- **Persistence**
  - [1-Propanol] : 0.2 log Kow (OECD TG 117, GLP)(ECHA)
- **Degradability**
  - [1-Propanol] : 64 (%) after 5 day O2 consumption (ECHA)

### C. Bioaccumulative potential

- **Bioaccumulative potential**
  - Not available
- **Biodegradation**
  - [1-Propanol] : 64 (%) after 5 day O2 consumption (ECHA)
  - [Glutaraldehyde] : 86 (%) (existing chemical safety inspections data)

### D. Mobility in soil

- [Glutaraldehyde] : log Kow = -0.18 (11)

### E. Other adverse effects

- Not available

## 13. DISPOSAL CONSIDERATIONS

### A. Disposal methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

### B. Special precautions for disposal

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

## 14. TRANSPORT INFORMATION

### A. UN No. (IMDG CODE/IATA DGR)

- 1274

#### **B. Proper shipping name**

- N-PROPANOL OR PROPYL ALCOHOL, NORMAL

#### **C. Hazard Class**

- 3

#### **D. IMDG CODE/IATA DGR Packing group**

- III

#### **E. Marine pollutant**

- Not applicable

#### **F. Special precautions for user related to transport or transportation measures**

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-D (Flammable liquids)

### **15. REGULATORY INFORMATION**

#### **A. National and/or international regulatory information**

- **POPs Management Law**
  - Not applicable
- **Information of EU Classification**
  - \* **Classification**
    - [1-Propanol] : H225, H318, H336
    - [Glutaraldehyde] : H331, H301, H314, H334, H317, H400
- **U.S. Federal regulations**
  - \* **OSHA PROCESS SAFETY (29CFR1910.119)**
    - Not applicable
  - \* **CERCLA Section 103 (40CFR302.4)**
    - Not applicable
  - \* **EPCRA Section 302 (40CFR355.30)**
    - Not applicable
  - \* **EPCRA Section 304 (40CFR355.40)**
    - Not applicable
  - \* **EPCRA Section 313 (40CFR372.65)**
    - Not applicable
- **Rotterdam Convention listed ingredients**
  - Not applicable
- **Stockholm Convention listed ingredients**
  - Not applicable
- **Montreal Protocol listed ingredients**
  - Not applicable

### **16. OTHER INFORMATION**

#### **A. Reference**

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

#### **B. Issue date**

- 2018-05-30

#### **C. Revision number and Last date revised**

- Not applicable

**D. Other**

- This SDS is prepared according to the Globally Harmonized System (GHS).