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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: Toluidine Blue O Stain  
Catalog Number: ST65  
Product Use: For laboratory use only

Manufacturer's Name: Dalynn Biologicals Inc.  
Supplier's Name: Dalynn Biologicals Inc.  
Address: 3253 – 34 Avenue NE  
Calgary, AB, Canada  
T1Y 6X2

Telephone: 1-888-404-4045  
Fax: (403) 250-9010  
Chemical Emergency: 1-613-996-6666  
Phone Number Only

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**2. HAZARD IDENTIFICATION****Emergency Overview****GHS Classification**

Flammable liquids (Category 2)

Skin irritation (Category 3)

Eye irritation (Category 2A)

**GHS Label Elements, Including Precautionary Statements**

Pictogram



Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.

H301 Harmful if swallowed.

H316 Causes mild skin irritation.

H319 Causes serious eye irritation.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves &amp; clothing/ eye protection/ face protection.

P310 Immediately call a poison center or doctor.

P302+P352 If on skin: Wash with plenty of water.

P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do so. Continue rinsing.

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### 3. COMPOSITION & INFORMATION ON INGREDIENTS

INGREDIENT	%	CAS-No.	EC-No.	Index-No.
Ethanol	69.0	64-17-5	200-578-6	603-002-00-5
Water	30.0	7732-18-5	231-791-2	-
Toluidine Blue O	1.0	92-31-9	202-146-2	-

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### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move affected individual out of affected area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing. Wash affected area with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with plenty of water for at least 15 minutes. Consult a physician.

#### If swallowed

Do not induce vomiting. Rinse mouth with water if patient is conscious. Take patient to hospital and consult a physician.

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### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Flammable in the presence of an ignition source when the temperature is above the flash point. Keep away from heat, sparks, open flame. No smoking.

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### Hazardous combustion products

Hazardous decomposition products formed under fire conditions: carbon oxides (ie. carbon dioxides, carbon monoxide)

#### Explosion data – sensitivity to mechanical impact

No data available.

#### Explosion data – sensitivity to static discharge

No data available.

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### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to explosive concentrations.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Wearing appropriate safety gear including chemical resistant gloves and dust mask or respirator. Soak up with paper or cloth towels and place in a sealed container and hold for disposal.

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use in area with adequate ventilation. Keep away from sources of ignition. No smoking.

**Conditions for safe storage**

Keep container tightly closed in a well ventilated place away from ignition sources.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,880 mg/m <sup>3</sup>	Canada. Alberta. Occupational Health and Safety Code (table 2:OEL)
		TWA	1,000 ppm	Canada. British Columbia OEL
		STEL	1,000 ppm	Canada. British Columbia OEL
		TWAEV	1,000 ppm 1,900 mg/m <sup>3</sup>	Canada. Ontario OELs
		TWAEV	1,000 ppm 1,880 mg/m <sup>3</sup>	Canada. Quebec. Regulation respecting occupational health and safety, schedule 1, Part 1
		TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)

**Personal protective equipment****Respiratory protection**

Use in area with adequate ventilation. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type ABEK (EN14387) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands after use.

**Eye protection**

Face shield and/or safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU).

#### **Skin and body protection**

Wear appropriate clothing such as a lab coat that covers as much of the body as possible. Complete suit can also be worn if desired.

#### **Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Appearance**

Form	Liquid
Color	Clear, colorless

### **Safety data**

pH	Less than 3
Melting point/ freezing point	-114°C (173°F) - ethanol
Boiling point	No data available
Flash point	14°C (57.2°F) cc - ethanol
Ignition temperature	363°C (685°F) - ethanol
Auto ignition temperature	363°C (685°F) - ethanol
Lower explosion limit	3.3% (V) - ethanol
Upper explosion limit	19.0% (V) - ethanol
Vapor pressure	No data available
Density	No data available
Water solubility	soluble
Partition coefficient/ n-octanol/water	No data available
Relative vapor density	No data available
Odour	No data available
Odour threshold	No data available
Evaporation rate	No data available

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## **10. STABILITY AND REACTIVITY**

### **Chemical stability**

Stable under recommended storage conditions.

### **Possibility of hazardous reactions**

Vapors may form explosive mixture with air.

**Materials to avoid**

Oxidizing agents, strong bases, reducing agents, alkali metals, peroxides, phosphorus oxychloride, chromic anhydride, chlorinated solvents

**Hazardous decomposition products**

Other decomposition products – No data available

Hazardous decomposition products formed under fire conditions – Carbon oxides

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## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50**

LD50 Oral – Rat – 10,470 mg/kg (ethanol)

**Inhalation LC50**

LD50 Inhalation – Rat – 4h - 30,000 mg/l (ethanol)

**Dermal LD50**

LD50 Dermal – Rabbit – 15,800 mg/kg (ethanol)

**Other information on acute toxicity**

No data available

**Skin corrosion/irritation**

Skin – Rabbit – No skin irritation – 24h – OECD Test Guidelines 404 (ethanol)

**Serious eye damage/eye irritation**

Eye – Rabbit – Moderate eye irritation – OECD Test Guidelines 405 (ethanol)

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

This table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Ethanol	64-17-5	Group 1	Known	A3	X	Not listed

**Reproductive toxicity**

Reproductive toxicity – Human – Female (Oral) (Ethanol)

Effects on newborn – Apgar score, drug dependence (Ethanol)

**Teratogenicity**

No data available

**Specific target organ toxicity – single exposure (GHS)**

No data available

**Specific target organ toxicity – repeated exposure (GHS)**

No data available

**Aspiration hazard**

No data available

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract inflammation. Vapors may cause drowsiness and dizziness.

**Skin** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes** Causes eye irritation on contact.

**Ingestion** Harmful if swallowed. Causes GI disturbances, nausea, dizziness and vomiting. Alcohol swallowed in sufficient quantity can cause blindness and death.

**Signs and Symptoms of Exposure**

CNS depression, narcosis, damage to the heart. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

No data available

**Additional information**

No data available

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**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethanol	EC50 (72h) = 275 mg/L (Chorella vulgaris)	Fathead minnow (Pimephales promelas) LC50 = 14,200 mg/L/96h	Photobacterium phosphoreum: EC50 = 34,634 mg/L/30 min Photobacterium phosphoreum: EC50 = 35,470 mg/L/5 min	EC50 = 9,268 mg/L/48h EC50 = 10,800 mg/L/24h

**Persistence and degradability**

Persistence is unlikely based on information available.

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**PBT and vPvB assessment**

No data available

**Other adverse effects**

No data available

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### 13. DISPOSAL CONSIDERATIONS

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

#### DOT (US)

UN Number: 1170    Class: 3    Packing Group: II

Proper Shipping Name: Ethanol Solution

Marine Pollutant: No

#### IMDG

UN Number: 1170    Class: 3    Packing Group: II    EMS-No: F-E, S-D

Proper Shipping Name: Ethanol Solution

Marine Pollutant: No

#### IATA

UN Number: 1170    Class: 3    Packing Group: II

Proper Shipping Name: Ethanol Solution

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### 15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by them.

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### 16. OTHER INFORMATION

#### Further information

Copyright 2021 Dalynn Biologicals Inc. The above information is believed to be correct but does not purport to be all inclusive and shall be only used as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Dalynn Biologicals Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.