

# MATERIAL SAFETY DATA SHEET

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FOR EMERGENCY CALL CHEMTREC – DAY OR NIGHT 800-424-9300 or OUTSIDE USA 202-483-7616

**Material Name:** Microbe-Lift/Bio-Blue (Part 1)

## INFORMATION ON INGREDIENTS

**Active component:** Enzyme protein  
**Common name:** Cellulase  
**CAS Number:** 9012-54-8  
**Hazardous Ingredients** Enzyme protein (10-40%)  
**Exposure Limit:** Not established

## HAZARDS IDENTIFICATION

**Description:** Aqueous enzyme preparation  
**Appearance:** Brown liquid  
**Odor:** Slight fermentation odor

### Potential Health Effects:

**Inhalation:** Inhalation of dust/aerosols may induce sensitization in susceptible individuals. Subsequent exposures may cause allergic reactions in sensitized individuals. Avoid inappropriate handling which may result in aerosol/dust generation.

**Eye Contact:** Non-irritating to the eyes. However, it is recommended that direct contact with the eyes be avoided.

**Skin Contact:** Non-irritating to the skin. However, it is recommended that prolonged contact with the skin be avoided.

**Ingestion:** Ingestion of material is not known to cause significant adverse health effects.

## FIRST AID MEASURES

**Skin Contact:** Wash skin with plenty of water.  
**Eye Contact:** Rinse eyes with plenty of water.  
**Ingestion:** Rinse mouth and throat thoroughly with water. Drink water.  
**Inhalation:** Remove from exposure. If symptoms of irritation or sensitization occur (shortness of breath, wheezing or labored coughing), call a doctor.

## FIRE-FIGHTING MEASURES

**Protection against Fire and Explosions:** No special requirements

HMS Rating: Health = 1  
Flammability = 1  
Reactivity = 0

**Suitable Fire Extinguishing Media:** Water Foam  
**Non-Suitable Media:** None  
**Special Exposure Hazards** None

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Material Name: Microbe-Lift/ Bio-Blue (Part 2)

Product Description: Dye

#### COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number
Water	0007732-18-5
C.I. Acid Blue 9, disodium salt	0003844-45-9
Citric Acid	0000077-92-9

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

Notes: No Additional information

#### HAZARDS IDENTIFICATION

Emergency overview  
See below for product details

Acute health effects  
ACID BLUE: May cause eye and skin irritation. Ingestion may cause irritation. Inhalation may cause respiratory tract discomfort.

Chronic health effects  
See Toxicological Information Section

Signs/Symptoms of exposure  
Skin contact may discolor skin due to pigment

Routes of exposure/entry  
Skin Contact, Inhalation, Ingestion, Eye Contact

Target organs  
Eyes, Respiratory tract, skin

Medical conditions aggravated by exposure  
Pre-existing skin problems may be aggravated by prolonged or repeated contact.

#### Carcinogenic status

The components of this mixture are not known to be listed or regulated by IARC, NTP, OSHA or ACGIH.

#### Reproductive effects

None expected

### FIRST AID MEASURES

If irritation or other symptoms (as noted above) occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

#### Eye contact

Immediately flush eyes with plenty of clean water for an extended time, not less than five (5) minutes. Flush longer if there is any indication or residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion.

#### Skin contact

Wash the affected area thoroughly with plenty of water and soap.

#### Inhalation

No inhalation effects known. If affected, remove to fresh air.

#### Ingestion

No ingestion effects known. Treat symptomatically.

#### Notes to physician

No Additional Information

### FIRE FIGHTING MEASURES

NFPA flammability class:	n/a
Flash point:	n/a
Explosive range:	LEL n/a UEL n/a

Notes: No additional Information

#### Fire and explosive properties

No information

#### Extinguishing media

Carbon dioxide, foam, dry chemical, water

#### Fire fighting instructions

Wear self-contained breathing apparatus (SCBA) and complete personal protective equipment when entering confined areas where potential for exposure to vapors or products of combustion exists.

#### Unusual fire/explosion hazards

None known.

### ACCIDENTAL RELEASE MEASURES

#### Containment techniques

Contain spill. If spilled in an enclosed area, ventilate.

#### Clean-up techniques

Wear proper personal protective clothing and equipment. Do not flush liquid into public sewer, water systems or surface waters. Soak up large spill residue and small spills with an inert absorbent. Place into labeled, closed container; store in safe location to await disposal.

#### Evacuation instructions

Not applicable

### HANDLING AND STORAGE

#### Handling

Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid drinking, tasting, swallowing or ingesting this product. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions.

#### Storage

Keep container closed when not in use. Do not store in open, unlabeled or mislabeled containers.

### EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	ACGIH-TWA	ACGIH-STEL	OSHA-TWA	OSHA-STEL
Water	N/E	N/E	N/E	N/E
C.I. Acid Blue 9	N/E	N/E	N/E	N/E
Citric Acid	N/E	N/E	N/E	N/E

Notes: No Additional Information

#### Engineering controls

Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to

maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS. Ventilation guidelines/techniques may be found in publication such as Industrial Ventilation: American Conference of Governmental Industrial Hygienists, 1330 Kemper Meadow Drive, Cincinnati, OH 45240-1634, USA.

Eye/face protection  
Safety glasses or goggles required.

Skin protection  
Wear protective gloves.

Respiratory protection  
Respiratory protection is not needed with proper ventilation. Wear an approved respirator (e.g. an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the exposure limit(s) of any chemical substance listed in this MSDS. Use respirator in accordance with manufacturer's use limitation and OSHA standard 1910.134 (29CFR).

General protection  
No additional information

#### PHYSICAL AND CHEMICAL PROPERTIES

Form	Viscous liquid	pH	3.5-4.5
Appearance	Blue	% Volatile by weight	50%
Odor	None	Specific gravity	1.16
Solubility in water	Soluble	VOC	0%
Evaporation rate	Slower than n-butyl acetate		
Vapor pressure	Not applicable	Boiling point °F	Not applicable
Melting point	Not available	Boiling point °C	Not applicable
Vapor density	Lighter than air		
Partition coefficient	Not applicable		

Notes: No additional Information

#### STABILITY AND REACTIVITY

Stability  
This products is stable.

Hazardous polymerization  
Hazardous polymerization will not occur.

Notes:  
No additional information

Conditions to avoid  
None known.

Incompatibility with other materials  
No specific incompatibilities. Materials which are not compatible with water will not be compatible with this product.

Hazardous decomposition products  
Carbon dioxide, Carbon monoxide

Additional reactivity / stability information  
None

Thermal processing emissions  
Not applicable

## TOXICOLOGICAL INFORMATION

Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

Chemical Name	LC50 Inhalation	Species	LD50 Oral	Species	LD50 Skin	Species
Water	N/E		N/E		N/E	
C.I. Acid Blue 9, disodium salt	N/E		>2000.0 mg/kg	Rat/adult	N/E	
Citric Acid	N/E		3.00 g/kg	Rat/adult	N/E	

Chemical Name	LC50 Inhalation	Species	LD50 Oral	Species	LD50 Skin	Species
Water	N/E		N/E		N/E	
C.I. Acid Blue 9, disodium salt	N/E		N/E		N/E	
Citric Acid	N/E		5040.00 mg/kg	Mouse	N/E	

**ACID BLUE 9:** Lifetime feeding studies in rats and mice indicate that Acid blue 9 is not carcinogenic. The no-observed-adverse-effect levels (NOAEL) in these studies were highest dose treated in male rats (1072 mg/kg/day) and both sexes of mice (7354-8966 mg/kg/day); the NOAEL in female rats was 631 mg/kg/day based on decrements in terminal body weight and survival. No reproductive or developmental effects have been observed in rats and rabbits. Human patch tests have not shown any evidence of sensitization or photosensitization. For further information, contact Noveon. As with all chemicals for which test data are limited or do not exist, caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

## ECOLOGICAL INFORMATION

**ACID BLUE 9:**

%BOD after 7 days = 77

12 days = 84

20 days = 88

No ecological testing has been conducted on this product.

#### DISPOSAL INFORMATION

For waste disposal purposes, this product is not known to be defined or designated as hazardous by current provisions of the Federal (EPA) Resource Conservation and Recovery Act (RCRA, 40CFR261). Incinerate waste product when in liquid regulation. Liquids cannot be disposed of in a landfill.

#### US RQ

Not applicable

#### TRANSPORTATION INFORMATION

UN/NA Number: N/A Hazard Class: N/A IMDG Class: N/A

Packing Group: N/A ICAO/IATA Class: N/A TDG Class: N/A

Name of Material: Not regulated – See Bill of Lading for Details

#### REGULATORY INFORMATION

This MSDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910, 1200

#### U.S. Toxic Substance Control Act:

All components of this product are either listed on the U.S. Toxic Substance Control Act (TSCA) Inventory of chemicals or are otherwise compliant with TSCA regulations.

#### U.S. CERCLA – SARA:

SARA Title III Section 312 Hazard Category (40 CFR 311/312):

Not Hazards

SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372:

None known

#### California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

Warning: the following ingredients present in the product are known to the state of California to cause birth defects or other reproductive hazards:

None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

The chemical identity of some or all components present is confidential business information (trade secret) and is being withheld as permitted by 29CFR1910.1200(i).

Canadian Domestic Substances List (DSL):

All components in this product are on the Canadian Domestic Substances List (DSL) or an exempt from listing.

Canadian Ingredient Disclosure List:

The following components are on the Canadian Ingredient Disclosure List (WHMIS):

None Listed

Canadian WHMIS Class:

Not controlled

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

## ACCIDENTAL RELEASE MEASURES

Spilled preparation should be removed immediately to avoid formation of dust from dried preparation. Take up by mechanical means preferable by a vacuum cleaner equipped with a high efficiency filter. Flush remainder carefully with plenty of water. Avoid splashing and high pressure washing (avoid formation of aerosols). Ensure sufficient ventilation. Wash contaminated clothing.

## HANDLING AND STORAGE

Avoid formation of aerosols and dust from drying out of spilled preparation. Avoid splashing and high pressure washing. Ensure good ventilation of the room, when handling this preparation.

**Storage Requirements:** Store container in a cool place.

## EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Controls:

Maintain good conditions of industrial hygiene, Some processes may require enclosures, local exhaust ventilation, or other engineering controls to control airborne levels. Additional handling and health/safety information is available upon request.

Recommended Personal Protective Equipment:

**Respiratory Protection:** Not required under usual conditions of use. However, if exposure potential exists, refer to NIOSH Criteria Guides to determine appropriate unit.

**Hand Protection:** Impermeable gloves recommended.

**Eye Protection:** Protective glasses or eye shield.

**Protection:** Wear suitable protective clothing.

### Exposure Guidelines:

**PEL (OSHA) for enzyme protein:** Not established

**TLV (ACGIH) for enzyme protein:** Not established

## PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Brown liquid

Odor, pH, Boiling point, Melting point, Flash point, Ignition temperature, Vapour pressure, Density and Solubility are not relevant to safety.

## STABILITY AND REACTIVITY

This material is stable under normal conditions of use.

**Conditions to Avoid:** None

**Materials to Avoid:** None

**Hazardous Decomposition Products:** None

## TOXICOLOGICAL INFORMATION

Inhalation of aerosols or dust resulting from inappropriate handling may induce sensitization and may cause allergic reactions in sensitized individuals. Oral rat LD-50 > 2g/kg b.w. classifies the preparation as "non-toxic".

### **ECOLOGICAL INFORMATION**

LC-50(fish)>100 mg/l, EC-50(daphnia)>100mg/l and IC-50(algae)> 100mg/l, which classifies the preparation as “non-dangerous” to the environment.

The preparation is biodegradable.

### **DISPOSAL CONSIDERATIONS**

Waste Disposal

No special disposal method required, except that in accordance with current local authority regulations.

### **TRANSPORT INFORMATION**

#### **Shipping Information:**

**Road/Rail:** Not Applicable

**Sea:** Not Applicable

**Air:** Not Applicable

### **REGULATORY INFORMATION**

*This product complies with FAO/WHO JECFA and FCC recommended specifications for food grade enzymes. The active ingredient and all components of the enzyme preparation are listed on the TSCA inventory.*

**Canadian WHMIS:** Controlled Product Hazard Class D2 A (respiratory sensitizer)

*This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.*