# TMB Substrate Buffer, 1X

# sc-286967

**Material Safety Data Sheet** 



Hazard Alert Code Key: EXTREME HIGH MODERATE LOW

# **Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

# **PRODUCT NAME**

TMB Substrate Buffer, 1X

# STATEMENT OF HAZARDOUS NATURE

Not considered a hazardous substance according to OSHA 29 CFR 1910.1200.

# **NFPA**



#### **SUPPLIER**

Santa Cruz Biotechnology, Inc. 2145 Delaware Avenue Santa Cruz, California 95060 800.457.3801 or 831.457.3800

# **EMERGENCY**

ChemWatch

Within the US & Canada: 877-715-9305 Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

# **Section 2 - HAZARDS IDENTIFICATION**

# **CHEMWATCH HAZARD RATINGS**

		Min	Max
Flammability:	0		
Toxicity:	0		
Body Contact:	0		Min/Nil=0 Low=1
Reactivity:	0		Moderate=2
Chronic:	0		High=3 Extreme=4

# **CANADIAN WHMIS SYMBOLS**

None

EMERGENCY OVERVIEW RISK

**ACUTE HEALTH EFFECTS** 

POTENTIAL HEALTH EFFECTS

# **SWALLOWED**

■ The material has NOT been classified as "harmful by ingestion".

This is because of the lack of corroborating animal or human evidence.

#### FVE

■ Although the liquid is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).

#### SKIN

■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

#### **INHALED**

■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

#### **CHRONIC HEALTH EFFECTS**

Section 3 - COMPOSITION / INI	FORMATION ON INGREDIENTS	
NAME	CAS RN	%
ingredients at levels determined not to be hazardous	100	

# **Section 4 - FIRST AID MEASURES**

#### **SWALLOWED**

· Immediately give a glass of water. · First aid is not generally required. If in doubt, contact a Poisons Information Center or a doctor.

#### EYE

■ If this product comes in contact with eyes: · Wash out immediately with water. · If irritation continues, seek medical attention.

#### SKIN

■ If skin or hair contact occurs: · Flush skin and hair with running water (and soap if available). · Seek medical attention in event of irritation.

#### **INHALED**

· If fumes or combustion products are inhaled remove from contaminated area. · Other measures are usually unnecessary.

#### **NOTES TO PHYSICIAN**

■ Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES			
Vapour Pressure (mmHG):	Not Available		
Upper Explosive Limit (%):	Not Available		
Specific Gravity (water=1):	Not Available		
Lower Explosive Limit (%):	Not Available		

### **EXTINGUISHING MEDIA**

· There is no restriction on the type of extinguisher which may be used.

Use extinguishing media suitable for surrounding area.

### **FIRE FIGHTING**

- $\cdot$  Use water delivered as a fine spray to control fire and cool adjacent area.
- $\cdot$  DO NOT approach containers suspected to be hot.

#### GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- · Non combustible.
- · Not considered to be a significant fire risk, however containers may burn.

# FIRE INCOMPATIBILITY

■ None known.

# PERSONAL PROTECTION

Glasses:

Chemical goggles.

Gloves:

When handling larger quantities:

General purpose rubber glove.

Respirator:

# **Section 6 - ACCIDENTAL RELEASE MEASURES**

# MINOR SPILLS

- · Clean up all spills immediately.
- · Avoid breathing vapors and contact with skin and eyes.

#### **MAJOR SPILLS**

- · Clear area of personnel and move upwind.
- · Alert Emergency Responders and tell them location and nature of hazard.

# **Section 7 - HANDLING AND STORAGE**

#### PROCEDURE FOR HANDLING

- · Limit all unnecessary personal contact.
- · Wear protective clothing when risk of exposure occurs.

#### RECOMMENDED STORAGE METHODS

- $\cdot \ \text{Polyethylene or polypropylene container}.$
- · Packing as recommended by manufacturer.

#### STORAGE REQUIREMENTS

- · Store in original containers.
- · Keep containers securely sealed.

# Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **EXPOSURE CONTROLS**

# **PERSONAL PROTECTION**





#### **RESPIRATOR**

Consult your EHS staff for recommendations

#### **EYE**

- · Safety glasses with side shields
- · Chemical goggles.

#### HANDS/FFFT

■ Wear general protective gloves, e.g.. light weight rubber gloves.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- · frequency and duration of contact,
- · chemical resistance of glove material,
- · glove thickness and
- · dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
- · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
- · Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

#### **OTHER**

■ No special equipment needed when handling small quantities.

OTHERWISE:

- · Overalls.
- $\cdot \ \text{Barrier cream}.$

#### **ENGINEERING CONTROLS**

■ General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear an approved respirator.

# **Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

# **PHYSICAL PROPERTIES**

LIQ	u	I	d	

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°F)	Not Available	Viscosity	Not Available
Boiling Range (°F)	Not Available	Solubility in water (g/L)	Not Available
Flash Point (°F)	Not Available	pH (1% solution)	Not Available

Decomposition Temp (°F)	Not Available	pH (as supplied)	Not Available
Autoignition Temp (°F)	Not Available	Vapour Pressure (mmHG)	Not Available
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	Not Available
Lower Explosive Limit (%)	Not Available	Relative Vapor Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Applicable

#### **APPEARANCE**

Liquid.

# Section 10 - CHEMICAL STABILITY

#### **CONDITIONS CONTRIBUTING TO INSTABILITY**

- · Presence of incompatible materials.
- · Product is considered stable.

#### STORAGE INCOMPATIBILITY

■ Avoid contamination of water, foodstuffs, feed or seed.

None known.

For incompatible materials - refer to Section 7 - Handling and Storage.

# **Section 11 - TOXICOLOGICAL INFORMATION**

Invitrogen Novex HRP Chromogenic Substrate (TMB)

#### **TOXICITY AND IRRITATION**

#### INVITROGEN NOVEX HRP CHROMOGENIC SUBSTRATE (TMB):

■ Not available. Refer to individual constituents.

# **Section 12 - ECOLOGICAL INFORMATION**

No data

# **Section 13 - DISPOSAL CONSIDERATIONS**

#### **Disposal Instructions**

All waste must be handled in accordance with local, state and federal regulations.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- · Reuse
- · Recycling
- · Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- · Recycle wherever possible.
- · Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

# Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

# **Section 15 - REGULATORY INFORMATION**

No data for Invitrogen Novex HRP Chromogenic Substrate (TMB) (CW: 21-0736)

# **Section 16 - OTHER INFORMATION**

Reasonable care has been taken in the preparation of this information, but the author makes no warranty of

merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

  A list of reference resources used to assist the committee may be found at: www.chemwatch.net/references.
- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: Dec-30-2010 Print Date: Feb-15-2011