

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Purified *Bordetella pertussis* toxin (PT)  
IUPAC name: Pertussis toxin from *Bordetella pertussis*  
Product number : PT-TNL  
CAS number: 70323-44-3

Company : The Native Antigen Company  
Building B  
Langford Locks  
Kidlington  
Oxfordshire  
OX5 1LH  
[Tel+44 \(0\)1865 595230](tel:+441865595230)


E-mail address : [contact@thenativeantigencompany.com](mailto:contact@thenativeantigencompany.com)

### 2. HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

Acute toxicity, Inhalation (Category 3)  
Acute toxicity, Dermal (Category 3)  
Acute toxicity, Oral (Category 3)  
Toxic by inhalation, in contact with skin and if swallowed.

#### Label elements

Pictogram 

Signal word: Danger

Hazard statement(s) H301 Toxic if swallowed.  
H311 Toxic in contact with skin.  
H331 Toxic if inhaled.

Precautionary statement(s) P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing.  
P284 Wear respiratory protection when dealing with powder

Hazard symbol(s) Toxic

R-phrases) R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

S-phrases) S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pertussis toxin from *Bordetella pertussis*. Sample is of biological origin and is presented as a white lyophilized solid in a glass vial. Each vial contains no more than 1000µg.

Additional components present: 0.05M sodium phosphate buffer at pH7.2 and 0.5M sodium chloride.

### 4. FIRST AID MEASURES

- If inhaled:** If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
- In case of skin contact:** Wash off with soap and plenty of water. Consult a physician.
- In case of eye contact:** Rinse thoroughly at eyewash station for at least 15 minutes and consult a physician.
- If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

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

#### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

#### Environmental precautions

Prevent further leakage or spillage if safe to do so.

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

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

### 7. HANDLING AND STORAGE

#### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Resuspend powder in safety cabinet. Provide appropriate exhaust ventilation at places where dust is formed.

#### Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.  
Recommended storage temperature: 2 - 8 °C

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

#### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator

type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

## Eye protection

Safety glasses

## Skin and body protection

Laboratory coat

## Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

White powder, lyophilized

### Safety data

pH:	pH 7.2 when resuspended
Melting point:	no data available
Boiling point:	no data available
Flash point:	no data available
Ignition temperature:	no data available
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Water solubility:	soluble

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

Avoid multiple freeze thaw cycles

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

None known

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 intraperitoneal - mouse - 15 µg/kg

### Skin corrosion/irritation

no data available

**Serious eye damage/eye irritation**  
no data available

**Respiratory or skin sensitization**  
no data available

**Germ cell mutagenicity**  
no data available

**Carcinogenicity**  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**  
no data available

**Aspiration hazard**  
no data available

**Potential health effects**  
Toxic if inhaled. May cause respiratory tract irritation.  
Harmful if swallowed, although low pH in gut can degrade the toxin, reducing its effects.  
Toxic if absorbed through skin. May cause skin irritation.  
May cause eye irritation.

**Signs and Symptoms of Exposure**  
Potentially neurotoxic.

**Additional Information**  
RTECS: XW5883750

## 12. ECOLOGICAL INFORMATION

**Toxicity**  
no data available

**Persistence and degradability**  
Toxin degrades easily

**Bioaccumulative potential**  
Low

**Mobility in soil**  
no data available

**PBT and vPvB assessment**  
no data available

**Other adverse effects**  
no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations. 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.

**14. TRANSPORT INFORMATION**

UN Number: 3462

Class: 6.1

Packing group: I

Proper shipping name: TOXINS EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (Pertussis toxin from Bordetella pertussis)

Shipped as Excepted Quantity transport class 6.1

**15. REGULATORY INFORMATION**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**16. OTHER INFORMATION**

If inactivated, this product is not considered hazardous by ingestion; pertussis toxin is degraded by the low pH in the gut and is not absorbed. Take special care when working in conjunction with hypodermic needles. If i.v. or i.m. injection should occur, consult a physician.

**Last update:** 06 June 2012

**Prepared by:** The Native Antigen Company

Although the information, opinions and recommendations contained in this Safety Data Sheet are compiled from sources believed to be reliable, we accept no responsibility for the accuracy, sufficiency, or reliability or for any loss or injury resulting from the use of the information.