

# Material Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

Trade Name: PHBV Powder  
Product Code: ENMAT Y1000

Version: 3.0

Revision Date: 2021/1/10

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name: PHBV Powder

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: A thermoplastic polyester with a variety of uses  
Uses advised against: Not mentioned

### 1.3 Details of the supplier of the safety data sheet

Company Name: Ningbo Tianan Biologic Material Co., Ltd  
68 Dagang 6th Rd. Beilun Ningbo China  
Tel: +86-574-86895240  
E-mail: [jessy@tianan-enmat.com](mailto:jessy@tianan-enmat.com)

### 1.4 Emergency telephone number

24-hour emergency: +86-13336636366

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

The product has not been classified as hazardous according to the legislation in force.  
Classification according to Regulation (EC) No 1272/2008 as amended.  
Not classified

### 2.2 Label Elements

Not applicable

### 2.3 Other hazards

None

## SECTION 3: Composition/information on ingredients

Chemical name	CAS Number	Content	Hazardous
Poly(3-Hydroxybutyric acid-co-3-hydroxyvaleric acid)	80181-31-3	> 98%	No

REACH Registration No.: PHBV is exempted from REACH registration.

## SECTION 4: First aid measures

General Information: Not toxic

### 4.1 Description of first aid measures

**Inhalation:** Remove to fresh air, if not breathing give artificial respiration. If breathing is difficult, give oxygen and get immediate medical attention.

**Skin Contact:** After contact with skin, wash immediately with plenty of water and soap. Cool burns with molten material with warm water, consult doctor if molten resin sticks to skin. Use gloves. Get medical attention if irritation occurs.

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**Eye contact:** Rinse immediately with plenty of water for at least 10 minutes taking care to wash under the eyelids. Seek medical attention.

**Ingestion:** Do not induce vomiting. If vomiting occurs naturally, have casualty lean forward to reduce the risk of aspiration. Seek medical attention immediately.

## 4.2 Most important symptoms and effects, both acute and delayed:

Swallowing by mistake may get choked

## SECTION 5: Firefighting measures

**5.1 Extinguishing Media:** Water, carbon dioxide, dry powder, foam.  
Inappropriate Extinguishing Media: None

**5.2 Specific Hazards by the Chemical Composition, by Its Burned Products or by the Emitted**  
Gases: Burning products include carbon monoxide(CO), carbon dioxide(CO<sub>2</sub>), or crotonic acid.

**5.3 Special Protection in Fire Fighting:**  
Wear self-containing breathing apparatus and chemical- protective clothing.

## SECTION 6: Accidental release measures

**6.1 Personal Protection:** Use protective equipment. (See Section 8.) Remove all sources of ignition. Avoid dust formation. Avoid contact with skin and eyes. Sweep up to prevent slipping hazard.

**6.2 Protection of the Environment:** None

**6.3 Procedures for Cleaning/Collection:** Shovel into suitable container for disposal.

**6.4 Additional Information:** Biodegradable

## SECTION 7: Handling and storage:

### 7.1 Precautions for safe handling:

Avoid contact with skin and eyes. Avoid dust formation. Workers should be protected from the possibility of contact with molten material during fabrication. Low hazard for usual industrial or commercial handling. Use personal protective equipment. (See Section 8)

### 7.2 Conditions for safe storage:

Store in a cool place, sealed. Keep at temperatures below 140F (60C).

### 7.3 Specific end use(s):

Thermoplastics processing to make biodegradable products

## SECTION 8: Exposure controls/personal protection

### 8.1 Control Parameters

**Specific Limits in Germany (AGW):** Not applicable

**Specific Limits of the EU:** Not applicable

**Surveillance of the Exposition:** Not applicable

### 8.2 Individual protection measures, such as personal protective equipment

**Personal Protection:** Not applicable

**Respiratory Protection:** Wear a NIOSH-certified respirator if exposed to dust

**Hand Protection:** Wear gloves

**Eye Protection:** Safety glasses with side shields. Goggles

**Protection of the Body:** Wear gloves and protective clothing

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Information for Work Hygiene: Not applicable

Environmental Protection: Not applicable, biodegradable

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form: Powder

Color: Off-white

Odor: Odorless to slightly sourish

Explosion: Not applicable

Lower Explosion Limit: Not applicable

Upper Explosion Limit: Not applicable

Vapor Pressure: Not applicable

Density: 1.25g/ml, (ISO 2811-1)

Solubility in Water: Not soluble

PH Value: Not applicable

Boiling Point Range: Not applicable

Flammability Point: Not applicable

Ignition Temperature: Not applicable

### 9.2 Other information: None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity:

Under normal conditions: stable

### 10.2 Chemical Stability:

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions:

None

### 10.4 Conditions to avoid:

Extremes of temperature and direct sunlight; avoid strong acids, alkali, oxidizing agents.  
Temperatures above 200 Degrees Celsius

### 10.5 Incompatible Materials:

Not known

### 10.6 Hazardous Decomposition Products:

None

## SECTION 11: Toxicological information

**General Information:** Not toxic, not irritant

**Toxicological Information:** To the best of our knowledge the toxicological properties have not been fully investigated

**Observation During Use:** None

**Data for composition:** No toxic additives

## SECTION 12: Ecological information

### 12.1 Toxicity

**Fish:** Not applicable

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**Aquatic Invertebrates:** Not applicable

**Water Plants:** Not applicable

**12.2 Persistence and Degradation:** Biodegradable

**12.3 Bioaccumulation Potential:** Does not bioaccumulate. Inherently biodegradable.

**12.4 Mobility in soil:** Biodegradable

**12.5 Results of PBT and vPvB:** Not available

**12.6 Other adverse effects:** No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

General information: No data available

Disposable methods: Dispose like plastics

Contaminated Packaging: No data available

## SECTION 14: Transport information

### 14.1 UN number:

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

Not applicable

### 15.2 Chemical safety assessment

No safety analysis was performed for this product or composition

## SECTION 16: Other information

**EU Regulations:** Not regulated

**Restrictions Suggested by the Producer:** Not applicable

**Other Suggestions:** Not applicable

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**Changes Since Last Update:** None

**Producer of the Safety Data Sheet:** Ningbo Tianan Biologic Material Co., Ltd.

**Disclaimer:** The information contained herein is based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to such data or information. The user is responsible for determining whether the product is suitable for its intended conditions of use.

**END OF DATA SHEET**