

Material Safety Data Sheet

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

Trade Name: PHB Pellet

Product Code: ENMAT Y3000P

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: PHB Pellet

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

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)	26744-04-7	98.5%	No
Boron nitride	10043-11-5	1%	No
KY1010 (antioxidant)	6683-19-8	0.5%	No

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

SECTION 4: First aid measures

General Information: Not toxic

4.1 Description of first aid measures

Inhalation: Not applicable

Skin Contact: After contact with skin, wash immediately with plenty of water and soap. Cool burns with molten

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material with warm water, consult doctor if molten resin sticks to skin. Use gloves. Get medical attention if irritation occurs.

Eye contact: Get medical attention if irritation occurs.

Ingestion: Never give to an unconscious person. Call a physician immediately if getting choked

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(CO₂), 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: None

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:

Minimize airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.

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 in case of burning

Hand Protection: Wear gloves when handling molten resins

Eye Protection: Not applicable

Protection of the Body: Not applicable

Information for Work Hygiene: Not applicable

Environmental Protection: Not applicable, biodegradable

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form: Pellets

Color: Off-white to beige

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.

10.5 Incompatible Materials:

Not known

10.6 Hazardous Decomposition Products:

None

SECTION 11: Toxicological information

General Information: Not toxic, not irritant

Toxicological Information: None

Observation During Use: None

Data for composition: No toxic additives

SECTION 12: Ecological information

12.1 Toxicity

Fish: Not applicable

Aquatic Invertebrates: Not applicable

Water Plants: Not applicable

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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

Changes Since Last Update: None

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

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END OF DATA SHEET