

Material Safety Data Sheet

According to norm (EG) No. 1907/2006

Trade Name: ENMAT PHBV Pellets
Product Code: Y1000P

Revision number: 1

Revision date: 2012/01/23

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Trade name: ENMAT PHBV pellets

Use of Product: A thermoplastic polyester with a variety of uses.

Producer: TIANAN BIOLOGIC MATERIALS COMPANY LTD.,
68 Dagang 6th Rd. Beilun Ningbo China PC: 315800

Customer service: +86-57486895240 , enquiry@tianan-enmat.com

Emergency 24-hour: +86-13336636366

2. POSSIBLE HAZARDS

Hazards

None

Additional Hazard Information for Humans and Environment

None

3. CHEMICAL PRODUCT IDENTIFICATION/COMPOSITION

<u>Chemical name</u>	<u>CAS Number</u>	<u>Content (Weight)</u>	<u>Hazardous</u>
Petanoic acid ,3-hydroxy-, (3 R)-,polymer with (3R)-3-hydroxybutanoic acid from cupriavidus necator fermentation of D- Glucose and propionic acid	80181-31-3	> 98%	No

Hazardous Component

None

Components with Mandatory EU-Limits

None

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4. FIRST-AID MEASURES

General Information: Not toxic

Acute Inhalation: Not applicable

Acute 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.

Acute Eye Contact: Not applicable

Acute Ingestion: Not applicable

Hints for the doctor: No information available

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water, carbon dioxide, dry powder, foam.

Inappropriate Extinguishing Media: None

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.

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

Additional Information: None

6. MEASURES NEEDED BY ACCIDENTAL RELEASE

Personal Protection: None

Protection of the Environment: None

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

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Additional Information: Biodegradable

7. HANDLING AND STORAGE

Recommendation for Safe Storage: Store in a cool place. Keep at temperatures below 140F (60C).
No special restrictions on storage with other products.

Protection Against Fire and Explosion: None

Further Recommendations: None

Requirement for Storage Areas: None

Storage Class VCI: Not regulated

Intended Uses: Thermoplastics processing to make biodegradable products

8. EXPOSITION LIMITS AND SURVEILLANCE/PERSONAL PROTECTION

Limits for Exposition at the Workplace and/or Biologic Limits

Specific Limits in Germany (AGW): Not applicable

Specific Limits of the EU: Not applicable

Surveillance of the Exposition: Not applicable

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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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:

Form: Pellets
Color: Off-white to beige
Odor: Odorless to slightly sourish

Data Affecting Security

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

10. STABILITY AND REACTIVITY

Conditions to Avoid: Temperatures above 200 Degrees Celsius.

Substances to Avoid: Strong acids, alkali, oxidizing agents.

Dangerous Decomposition Products: No decomposition expected under normal storage conditions. Burning produces carbon monoxide(CO), carbon dioxide (CO₂), crotonic acid.

11. TOXICOLOGICAL DATA

General Information: Not toxic, not irritant

Toxicological Information: None

Observation During Use: None

Data for composition: No toxic additives

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12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Not applicable

Aquatic Invertebrates: Not applicable

Water Plants: Not applicable

Mobility: Not applicable

Persistence and Degradation: Biodegradable

Bioaccumulation Potential: Does not bioaccumulate. Inherently biodegradable.

Results of PBT Properties: No data available

Other Toxic Properties: No data available

13. DISPOSAL CONSIDERATIONS

Product/Compound: Recycling, composting, incineration

Recommendation: Dispose like plastics

Disposition Key According to Refuse List (AVV): 020104, 200108

Soiled Packages: Not regulated

14. TRANSPORT INFORMATION

Land ARD/RID: Not regulated

Sea IMDG/GGVSea: Not regulated

Air ICAO-TI and IATA-DGR: Not regulated

15. REGULATORY INFORMATION

Safety Analysis: No safety analysis was performed for this product or composition

Label(s) and Signs for the Product or Composition: Not regulated

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Safety for Determining Components for Labeling: Not regulated

EU Requirements: Not regulated

National Requirements: Not regulated

Water: Not regulated

Air: Not regulated

Accidents (12. BimSchV): Not regulated

Solvents (31. BimSchV): Not regulated

Restrictions: Not regulated

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 Materials 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