

# Safety Data Sheet

## BioPBS™ (FZ Type)

### 1. Identification of the substance and of the supplier

#### 1.1 Product identifiers

Product Name : BioPBS™ (FZ Type)  
Grade Name : FZ71PM, FZ91PM, FZ71PB, FZ91PB, FZ79AC, FZ78TM and FZ71PK

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

Relevant Identified uses : Polymer  
Recommended use : For industrial processing only

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

Company : PTT MCC Biochem Company Limited  
555/2 Energy Complex Tower, Building B, 14<sup>th</sup> Floor,  
Vibhavadi Rangsit Rd. Chatuchak, Bangkok 10900  
Telephone : +66 (0) 2140-3555  
Fax : +66 (0) 2140-3556

#### 1.4 Emergency telephone number

Emergency telephone number : +66 (0) 2140-3555

### 2. Hazards Identification

Regulation 29 CFR Part 1910.1200: 2012 OSHA Hazard Communication Standard,

#### 2.1 Classification of the substance

No need for classification according to GHS criteria for this product.

#### 2.2 Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

#### 2.3 Other hazards

None

### 3. Composition/Information on Ingredients

Regulation 29 CFR Part 1910.1200: 2012 OSHA Hazard Communication Standard

This product does not contain any components classified as hazardous under the referenced regulation.

3.1 Substance or mixture: Substance

3.2 Chemical name (or Nonproprietary name): Aliphatic Polyester  
Content: 98-100%

3.3 Chemical or structural formula: Polyester having the structure of  
-[OC4H8O]- and -[COC2H4CO]-

3.4 CAS Number: 25777-14-4

## 4. First Aid Measures

### 4.1 Description of first aid measures

#### **Inhalation:**

Move person to fresh air. If patient is not breathing or breathing irregular, provide artificial respiration. Obtain medical attention by physician if symptoms persist.

#### **Skin contact:**

Remove pellets and dusts from skin, clothes, shoes, etc. If molten matter comes into contact with skin, pour plenty of water on the clothes in order to cool the affected skin area sufficiently. Take off the clothes and cover the affected skin area with clean gauze. Consult a specialist as soon as possible.

#### **Eye contact:**

Rinse the eyes with plenty of clean water for at least 15 minutes. While rinsing the eyes, open the eyelids wide with fingers to let the water reach all the portions of the eyes. Do not rub the eyes. Remove any Contact lenses if easy to do. Then, consult an ophthalmologist.

#### **Ingestion:**

Wash the mouth thoroughly with water.

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

Molten polymer may cause burn. Dust contact with the eyes can lead to irritation.

### 4.3 Indication of any immediate medical attention and special treatment needed:

Treatment is symptomatic and supportive.

## 5. Fire Fighting Measures

### 5.1 Extinguishing media

Water spray; Carbon dioxide; foam; dry chemical powder

### 5.2 Special hazards arising from the substance

Carbon monoxide, Carbon dioxide.

### 5.3 Special protective equipment and precautions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 6. Accidental Release Measure

### 6.1 Personal precautions, protective equipment and emergency procedures

If material remains on the floor or ground, it may make the surface slippery. Remove pellets frequently. Avoid generating dust. When working, wear appropriate protective equipment and avoid breathing dust. Eliminate all sources of ignition near the area of the leak. Use proper personal protection equipment as indicated in section 8.

### 6.2 Environmental precautions

To avoid affecting the environment, prevent spilled material from entering rivers or other aquatic environments.

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

Sweep up dispersed material and place it in an empty container that can be tightly closed. If possible, first moisten dispersed material to prevent dust from rising.

## 7. Handling and Storage

### 7.1 Precautions for safe handling

Handle in well-ventilated places. Avoid contact with skin and eyes. Avoid breathing dust, vapor, as all types of polymers may develop dust during transportation or grinding of granules. Do not use hook for handling bag, stack correctly.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage stability:

Store in a dry place.

Protect against moisture.

Store away from excessive heat. No direct sunlight.

### General Advice:

Keep container tightly closed. Avoid deposition of dust.

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

Not established

### 8.2 Appropriate engineering controls

Use local exhaust ventilation

### 8.3 Personal protective equipment

**Respiratory protection** : Dust respirator

**Hand protection** : Safety gloves

**Eye protection** : Safety glasses

**Skin and body protection** : Safety clothes (with long sleeves), safety shoes

### 8.4 Work / Hygienic Practices

Eating, drinking and smoking in work areas is prohibited.

Wash hands after use.

Remove contaminated clothing and protective equipment before entering eating areas.

## 9. Physical and Chemical Properties

a) Appearance and Colour	White granule
b) Odour	Slight odor
c) Odour threshold	No data available
d) pH	No data available
e) Melting point/freezing point	115°C
f) Initial boiling point and boiling range	Not applicable
g) Flash point	>300°C (estimated)
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Not applicable
k) Vapour pressure	Not applicable
l) Vapour density	Not applicable
m) Relative density	1.20 to 1.30
n) Water solubility	Insoluble in water
o) Partition coefficient: noctanol/water log Pow	No data available
p) Auto ignition temperature	> 300°C (estimated)
q) Decomposition temperature	No data available
r) Viscosity	No data available

## 10. Stability and Reactivity

### 10.1 Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

### 10.2 Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### 10.3 Possibility of hazardous reactions

The product is stable if stored and handled as prescribed/indicated.

### 10.4 Conditions to avoid

High moisture and temperature

## 10.5 Incompatible materials

No data available

## 10.6 Hazardous decomposition products

Carbon monoxide, Carbon dioxide, Hydrocarbons and other oxides.

# 11. Toxicological Information

## 11.1 Information on the likely routes of exposure

Inhalation : May affect to respiratory tract in case of the material is in powder state.  
Skin contact : May cause skin irritation. Molten polymer may cause thermal burns.  
Eye contact : Dust or powder contact with the eyes can lead to mechanical irritation.  
Ingestion : With ingestion, nausea, vomiting, and diarrhea are common

## 11.2 Delayed and immediate effects and also chronic effects from short and long term exposure;

Immediate effect : May cause skin irritation. Mechanical eye irritation is possible.  
After inhalation of process fumes and vapor may cause soreness in the nose and throat, cough and wheezing are common.

Chronic effects : No data available

## 11.3 Numerical measures of toxicity

Acute toxicity : LD50 oral rat > 5000 mg/kg

# 12. Ecological Information

## 12.1 Ecotoxicity

Acute aquatic toxicity : No data available

## 12.2 Persistence and degradability

: Biodegradation into CO<sub>2</sub>

## 12.3 Bioaccumulative potential

: No data available

## 12.4 Mobility in soil

: No data available

## 12.5 Other adverse effects

Do not dump or discharge the material into aquatic environments, so as to prevent marine organisms from ingesting material.

# 13. Disposal Considerations

## 13.1 Waste treatment methods

Disposal must be according to applicable Federal, State and Local regulations

## 13.2 Contaminated packaging

Disposal must be according to applicable Federal, State and Local regulations

# 14. Transport Information

## 14.1 UN number

: None

## 14.2 UN proper shipping name

: None

## 14.3 Transport hazard class(es)

: None

## 14.4 Packaging group

: None

## 14.5 Environmental hazards

: None

## 14.6 Transport in bulk

: None

## 14.7 Special precautions for user

: No data available

## 15. Regulatory Information

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

<b>Europe:</b>	Registration, Evaluation, Authorisation and Restriction of Chemical Regulation (EC) No.1907/2006 (REACH)	:	The ingredients in this product are in compliance.
<b>Asia:</b>			
China:	Inventory of Existing Chemical Substances in China (IECSC)	:	Listed
Japan:	Laws and Regulation in Japan (ENCS): Chemical Substances Control Law Classification Class Reference No. in The Gazette list  Fire Service Law	:	Existing 7-708  Classified in inflammables under Article 34 of the Fire Prevention Regulations in Japan.
Korea:	Korean Existing Chemical Inventory (KECI)	:	KE No. 2010-3-4234
Taiwan:	National Existing Chemical Inventory (NECI)	:	Listed
Thailand:	Notification of Ministry of Industry Subject: Chemical Hazard Classification and Chemical Hazard Communication. B.E.2555)	:	Not a hazardous substance
<b>North America:</b>			
USA:	Toxics Substances Control Act Inventory (TSCA)	:	Listed
Canada:	Domestic Substance List	:	Listed

### 15.2 Chemical Safety Assessment

No data available

## 16. Other Information

To the best of our knowledge, the information contained herein is corrected and reliable as of the date of publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, and disposal. The information relates only to the specific material designated and not valid for such material used in combination with any other material or in any process. It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. PTT MCC Biochem Company Limited makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any implied warranty of merchantability or fitness for a particular purpose.