Safety Data Sheet
PBAT (BG-1000)

1. Identification of the substance and of the supplier

1.1 Product identifiers
Product Name: PBAT(BG-1000)
Grade Name: BG-1000

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: TLC KOREA
74, Makgol-gil, Hojeo-myeon, Wonju-si, Gangwon-do, Korea, 26303
Telephone: +82 (0) 33-732-9157
Fax: +82 (0) 33-732-9158

1.4 Emergency telephone number
Emergency telephone number: +82 (0) 33-732-9157

2. Hazards Identification

Not a hazardous substance or mixture according to Notification of Ministry of Industry, Subject: Chemical Hazard Classification and Chemical Hazard Communication. B.E.2555

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

3.1 Substance or mixture: Substance

3.2 Chemical name (or Non proprietary name): Aliphatic Polyester
Content: 99-100%

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

3.4 CAS number: 67423-06-7
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 fire fighting 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 protective 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, vapour, as all types of polymers may develop dust during transporting or grinding of granules. Do not use hook for handling bag, stack correctly.

7.2 Conditions for safe storage, including any incompatibilities
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

APPEARANCE: Opaque off-white
ODOR: Mild
PHYSICAL STATE: Pellets
BOILING POINT: Not determined.
SPECIFIC GRAVITY: 1.25 g/cc ASTM D1505
BULK DENSITY: 0.8 g/cc ASTM D1895 (Poured)
SOLUBILITY IN WATER: Not determined.
pH: Not currently available.
VAPOR PRESSURE: Not applicable.
VAPOR DENSITY: Not applicable.
FREEZING POINT: Not determined.
MELTING POINT: 62 - 118

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 material
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 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**: EC50/72h/algae > 1100 mg/L
- **Persistence and degradability**: Inherently biodegradable under industrial composting conditions
- **Bioaccumulative potential**: Not expected to bioconcentrate or bioaccumulate.
- **Mobility in soil**: No data available
- **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): Non hazardous for any kind of transport (road/air/ship)
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

- **Europe**: 

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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. TLC Korea Co., Ltd. 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.