

## MATERIAL SAFETY DATA SHEET (MSDS)

**Product : Enviplast Pellet  
(Bio-based Composite)**

### 1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

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#### 1.1. Identification of the Product

Product Name : Enviplast Pellet  
Composition / Chemical Formula : See description 1.2  
Product Grade : Bio-based composite  
Chemical Family : Bio-based composite made from starch and vegetable oil derivatives  
Dangerous components : None

#### 1.2. Description

The original of the raw materials come from sustainable resources: starch from cassava and plasticizer derivative from vegetable oil, that will breakdown into carbon dioxide, water and biomass.

#### 1.3. Company Identification

Company Name : Inter Aneka Lestari Kimia, PT.  
Address : Jl. Yos Sudarso, Kp. Rawa Bamban RT 02 / 07 Jurumudi Baru, Benda, Tangerang, Banten, Indonesia 15124  
Factory Address : Jl. Raya Serang KM. 24.5. Kp. Jaha RT 02/01, Ds. Sentul Jaya. Kec. Balaraja, Tangerang, Banten, Indonesia 15610  
Telephone / Fax : +62 21- 5945 0505 / +62 21- 5945 0133

### 2. USE

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The product(s) are intended for use in the manufacture of environmental friendly shopping bags, poly-bags and garbage bags.

### 3. HAZARDS IDENTIFICATION

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Not Applicable  
There is no hazardous warning for its components.

### 4. FIRST AID MEASURES

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Ingestion : Not ordinarily required.

Inhalation of degradation products during heating of product : supply fresh air.

Skin contact with molten product : remove contaminated clothes. Wash skin with soap and water. Do not remove solidified product from skin. Treat as for thermal burn. Seek medical assistance.

Eye contact : Flush with water if irritation occurred.

Note to physician : None/Treat symptomatically.

### 5. FIRE FIGHTING MEASURE

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Does not present specific fire hazard, but will burn if ignited.

Flash point : not applicable

Explosion Limits (upper/Lower) : Not applicable.

Suitable extinguisher agents : use water fog, dry chemical or carbon dioxide, extinguishing powder or water spray. Larger fires can be fought with large water spray or alcohol resistant foam.

Combustion products : in case of fire carbon dioxide and water vapor are released.

Protective equipment : normal personal protective equipment (helmet, safety glass and safety shoes)

### 6. ACCIDENTAL RELEASE MEASURES

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Methods for cleaning up : shovel and sweep or use industrial vacuum cleaner as for pellets. Put into containers for reclaiming or disposal as permitted by applicable national, state and/or local regulations.

## 7. STORAGE AND HANDLING

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1. Improper storage can initiate degradation that will affect the product's physical properties.
2. Containers or sacks should be kept tightly closed, when not in use.
3. Precautions for storage place : natural ventilation and dry place.
4. Avoid direct contact with water.

## 8. EXPOSURE CONTROL AND PERSONAL PROTECTION

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- General ventilation : adequate ventilation and/or engineering controls must be employed in high temperature processing.
- Protective clothing : not ordinarily required.
- Eye protection : safety goggles.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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- Appearance : Slightly yellowish pellet
- Stability : Stable
- Solubility in Water at 80 °C : 200 g/L
- Vapour pressure : Not applicable
- Density (ASTM D792) : 1.23 – 1.27 g/cm<sup>3</sup>
- Melt flow index (170 °C, 5 Kg) : 15 - 20 g/10 min  
(ASTM D1238)
- Melting Temperature (ASTM D3418) : 170 – 190 °C.
- Ash Content : Max. 1.0 %
- Flammability : Not flammable
- Percent Volatile by Volume : Nil
- Auto-ignition temperature : Not applicable

## 10. STABILITY AND REACTIVITY

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Stability	: Stable
Hazardous polymerization	: Will not occur
Material to avoid	: Strong oxidizing agents
Conditions to avoid	: Direct contact with water
Hazardous decomposition products	: Not applicable

## 11. TOXICOLOGICAL INFORMATION

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Classified as non toxic with LD considered > 5000 mg/Kg (According to OECD 423 Test Guideline).

## 12. ECOLOGICAL INFORMATION

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Environmental toxicity : Eco toxicity based on EN 13432 (2000), ASTM D 6400-04, and ISO 17088 (2008) are fulfilled for barley plants. 10% concentration after composting Enviplast bio-based raw material, no residuals were left such as metabolites, undegraded components, and inorganic components that event a negative influence on the germination and growth of barley plants.

Environmental effects in soil and water: when this material products are release into soil, this material is expected to biodegrade by microorganism without any toxic residue.

Environmental effects in air : Not applicable.

## 13. DISPOSAL CONSIDERATION

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This material will breakdown into carbon dioxide and water without any toxic residue. Whatever cannot be recycled like packaging, label, transport container can be disposed as per local regulations and good engineering practice.

## 14. TRANSPORTATION INFORMATION

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This material is not hazardous to transport.

DOT regulations : no hazard class  
Land Transport ADR/RID (cross border) : none  
Maritime transport IMDG : none  
Air transport ICAO-TI and IATA-DGR : none.

## 15. REGULATORY INFORMATION

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There are no established exposure limits for the mixture, however, dust and fumes from processing should be ventilated adequately.

To the best of our knowledge :

None of the mixture components are on the health & safety reporting list.  
None of the mixture components in this product are under a Chemical Test Rule.  
None of the mixture components are listed under TSCA section 12b (export notification).  
None of the mixture components in this material have an SNUR under TSCA.  
None of the mixture components in this material have an RQ under CERLCA.  
None of the mixture components in this material have a TPQ under SARA.  
None of the mixture components in this material is reported under section 313.

Clean Air Act :

This material does not contain any hazardous air pollutants.

Clean water act :

None of the chemicals in this product are listed as hazardous substances under the CWA.  
None of the chemicals in this product are listed as priority pollutants under CWA.  
None of the chemicals in this product are listed as toxic pollutants under CWA.

OSHA :

None of the chemicals in this product are considered highly hazardous by OSHA.

California Prop 65 :

California no significant risk level : none of the chemicals in this product are listed.

European / International Regulations

European labeling in accordance with EU/EC Directives

Hazard Symbols : not available  
Risk Phrases : no Information available.  
Safety Phrases : no Information available.  
WGK : no Information available.

## 16. OTHER INFORMATION

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Employers should use this information as basis and/or supplement to other information and data gathered and should make independent judgment of suitability of this information to ensure proper use and to protect the health and safety of employees and the environment. This information is furnished without warranty and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with an other product or process is the responsibility of the user.

## 17. ABBREVIATIONS

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Abbreviations used

OSHA = Occupational Safety & Health Administration (USA)

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Doc.No. 1401-00/MSDS/pellet

**PT. INTER ANEKA LESTARI KIMIA**



Factory :  
Jl. Raya Serang KM 24-5, Balaraja  
Tangerang 15610 Indonesia  
T : +62 21 5945 0505 F : +62 21 5945 0133

Sales & Marketing :  
Jl. Kesehatan No.21  
Jakarta 10160 Indonesia  
T : +62 21 380 3805 F : +62 21 350 1771

[www.enviplast.co.id](http://www.enviplast.co.id) [info@enviplast.co.id](mailto:info@enviplast.co.id)