MATERIAL SAFETY DATA SHEET

SECTION 01. IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY

Product Name: PLA Resin

Recommended Use: Plastics Processing
Uses advised against: Pharmaceutical, Medicinal products.
Company: Hangzhou Peijin Chemical Co., Ltd.
Add: Floor 7th, No.332, Xihua street, Hangzhou, Zhejiang, China P.C.310012
Tel: +86-571-86333092
Fax: +86-571-86333092
E-mail: amylin@pekinchem.com

Emergency phone No.: +86-571-86333092 (only available in working days)

Physical state @20°C: Solid
Appearance: Pellets
Colour: White / opaque
Odour: Odourless

Interactions with Other Chemicals: Incompatible materials: Moisture, Water.

Hazards: Not Otherwise Classified: None known.
(HNOC)
Unknown toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity.

SECTION 02. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polylactide resin</td>
<td>9051-89-2</td>
<td>&gt;99</td>
</tr>
</tbody>
</table>

Dangerous Components: No dangerous components according to 2001/58/EC

SECTION 03. FIRST AID MEASURES

General advice: No hazards which require special first aid measures.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

Skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.

Ingestion: Rinse mouth. Get medical attention immediately if symptoms occur.
Inhalation  Move to fresh air. Get medical attention immediately if symptoms occur.

Main symptoms  No acute and delayed symptoms and effects are observed.

Notes to physician  Treat symptomatically.

Protection of first-aiders  Use personal protective equipment. Avoid contact with skin, eyes and clothing.

**SECTION 04. FIRE FIGHTING MEASURES**

<table>
<thead>
<tr>
<th>Flammable properties</th>
<th>Not flammable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Suitable Extinguishing Media</td>
<td>Water spray, Foam, Dry powder, Carbon dioxide (CO2).</td>
</tr>
<tr>
<td>Unsuitable Extinguishing Media</td>
<td>Do not use a solid water stream as it may scatter and spread fire.</td>
</tr>
<tr>
<td>Special Hazard</td>
<td>Hazardous decomposition products formed under fire conditions: Carbon oxides, Acetaldehyde.</td>
</tr>
<tr>
<td>Protective Equipment and</td>
<td>Wear self-contained breathing apparatus and protective suit.</td>
</tr>
<tr>
<td><em>Precautions for Firefighters</em></td>
<td></td>
</tr>
<tr>
<td>Fire fighting measures if you</td>
<td>Evacuate non-essential personnel. Move containers from fire area can do it without risk. Keep containers and surroundings cool with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.</td>
</tr>
</tbody>
</table>

**Sensitivity to Mechanical Impact**  None.

Sensitivity to Static Discharge  None

**SECTION 05. ACCIDENTAL RELEASE MEASURES**

Personal precautions Evacuate personnel to safe areas. Do not touch or walk through spilled
material. Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not breathe dust. Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions
Prevent further leakage or spillage if safe to do so.
Methods for cleaning up
Avoid dust formation. Sweep up and shovel into suitable containers for disposal. Following product recovery, flush area with water.

SECTION 06. HANDLING AND STORAGE

Handling:
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust. Ensure adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Storage:
Store in accordance with local regulations. Keep containers tightly closed in a cool, well-ventilated place. Keep at temperatures below 50 °C/122 °F. Protect from moisture, Water.
To ensure the technical integrity of the product: Storage/Handle under nitrogen and protect from moisture.

SECTION 07. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Contains no substances with occupational exposure limit values.

Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas. Keep at temperatures below 230 °C/446 °F.

Personal Protective Equipment

Eye protection
Tightly fitting safety goggles (EN166).
Hand Protection
Protective gloves (EN374): Butyl rubber. Glove thickness: 0.5 mm.
Break through time: >8 hours.
Skin and body protection:
Long sleeved clothing.
Respiratory protection:
In case of insufficient ventilation wear suitable respiratory equipment.
Recommended Filter Type: P2 / FFP2.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Workers must be trained in the proper use and handling of this product as required under applicable regulations. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before re-use.

Environmental Exposure Controls
The product should not be allowed to enter drains, water courses or the soil.
**SECTION 08. EXPOSURE CONTROLS/PERSONAL PROTECTION**

<table>
<thead>
<tr>
<th>Physical state @20°C</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Pellets</td>
</tr>
<tr>
<td>Colour</td>
<td>White / opaque</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>150-230 °C/ 302- 446 °F</td>
</tr>
<tr>
<td>Boiling point.boiling range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt;230 °C/&gt;446 °F</td>
</tr>
<tr>
<td>Viscosity, dynamic Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidising properties Density</td>
<td>Not explosive Not oxidizing 1.2-1.3 g/cm³</td>
</tr>
</tbody>
</table>

**SECTION 09. STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Stability</th>
<th>Stable under recommended storage conditions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials to Avoid</td>
<td>Moisture, Water.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Temperatures above 230 °C / 446 °F.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Hazardous decomposition products formed under fire conditions:Carbon oxides, Acetaldehyde.</td>
</tr>
<tr>
<td>Hazardous Polymerisation</td>
<td>No information available</td>
</tr>
<tr>
<td>Hazardous Reactions</td>
<td>Hazardous polymerisation does not occur.</td>
</tr>
</tbody>
</table>

**SECTION 10. TOXICOLOGICAL INFORMATION**

Acute toxicity

- Acute toxicity
  - Ingestion: No known effect.
  - Skin contact: No known effect.
  - Inhalation: No known effect.
  - Skin corrosion/irritation: No known effect.
  - Serious eye damage/irritation: No known effect. Respiratory or skin sensitisation: No known effect. STOT-single exposure: No known effect.
Aspiration hazard  
No known effect.

Chronic toxicity  
Contains no ingredient listed as a carcinogen.

Carcinogenicity  
Not known to cause heritable genetic damage.

Germ cell mutagenicity  
Not known to cause heritable genetic damage.

Reproductive toxicity  
Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs.

STOT-repeated exposure  
No known effect.

Symptoms  
No acute and delayed symptoms and effects are observed.

SECTION 11. ECOLOGICAL INFORMATION

Ecotoxicity effects  
Contains no substances known to be hazardous for the environment.

Persistence and degradability  
Decomposes in contact with water. Hydrolysis product (S-lactic acid): Readily biodegradable.

Bioaccumulative potential  
No information available.

Mobility in soil  
No information available.

Other adverse effects  
No information available.

SECTION 12. DISPOSAL CONSIDERATIONS

Waste disposal methods: Dispose of in accordance with local regulations.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 13. TRANSPORT INFORMATION

According to: US DOT, IMDG, ICAO/IATA, ADR.
Not regulated.

SECTION 14. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL/NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polylactide resin</td>
<td>Listed</td>
<td>Listed</td>
</tr>
</tbody>
</table>

Federal Regulations
SARA 311/312 Hazard Categories
Acute Health Hazard  No
Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No
Clean Water Act This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).
CERCLA This material, as supplied, does not contain substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).
State Regulations
California Proposition 65 This product does not contain any Proposition 65 chemicals.
U.S. State Right-to-Know Regulations
No information available.
Other information
No information available.
International Regulations
Canada This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.
WHMIS Hazard Class Not subject to WHMIS classification

SECTION 15. OTHER INFORMATION

Release date 2018-11-19
Version A/0
Training Advice Workers must be trained in the proper use and handling of this product as required under applicable regulations.
Abbreviations/acronyms
ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value
OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits
NIOSH IDLH: National Institute for Occupational Safety and Health-Immediately Dangerous to Life or Health
OSHA: Occupational Safety and Health Administration
IARC: International Agency for Research on Cancer NTP:
National Toxicity Program
SARA: Superfund Amendments and Reauthorization Act
ACGIH: American Conference of Governmental Industrial Hygienists CFR: U.S. Code of Federal Regulations
ADR: Accord européen relatif au transport international des marchandises
Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by Road)
DOT: Department of Transport
IMDG: International Maritime Dangerous Goods Code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
WHMIS: Workplace Hazardous Materials Information System
CPR: Controlled Products Regulations