WINKLE

SAFETY DATA SHEET

PLA HIGH SPEED

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

1. Product identifier

Product name: PLA Neat resin

Trade name: L105, L130, L175, LX175, LX175R, LX530, LX575, LX930, LX975, TGR1, TGR2, TGR3, Development Grade

Recommended use Plastics

Restrictions on use Pharmaceuticals,Medical device

2. Company identification

Supplier: Laboratorio Geométrico S.L.
Calle Segunda (Polígono Industrial El Montalvo III), 4,
37188, Carbajosa de la Sagrada
info@winkle.shop
670 37 88 29

Emergency telephone numbers (24 hours a day): 112

2. HAZARDS IDENTIFICATION

1. Classification of the substance or mixture

Classification according to GHS BR (ABNT NBR 14725)
Chemical product not classified as hazardous according to ABNT standard 14725-2

2. Label elements

GHS BR labelling
No labelling applicable

3. Other hazards not contributing to the classification

Warning. Potential dust explosion hazard. Dust may form explosive mixture in air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

1. Substances CAS-No.: 9051-89-2
Substance type: Polymer
Name: PLA Neat resin
CAS-No.: 9051-89-2
EC-No.: 618-575-7

Name	Product identifier	Conc. (% w/w)
Polylactide resin	(CAS-No.) 9051-89-2	99-100

2. Mixtures Not applicable

4. FIRST AID MEASURES

1. Description of first aid measures

General: If you feel unwell, seek medical advice.
Inhalation: Remove person to fresh air and keep comfortable for breathing.
Skin contact: Wash skin with plenty of water.
Eye contact: Rinse eyes with water as a precaution.
Ingestion: Call a poison center or a doctor if you feel unwell.

2. Most important symptoms and effects, both acute and delayed

Symptoms/effects: None known. Non-hazardous substance.

3. Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically.
Other medical advice or treatment: Treat symptomatically.

5. FIREFIGHTING MEASURES

1. Extinguishing media

Suitable extinguishing media: Water spray. Dry powder. Foam.
Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

2. Special hazards arising from the substance or mixture

Fire hazard: No fire hazard.
Explosion hazard: Dust can form an explosive mixture with air.
Reactivity in case of fire: Under fire conditions, hazardous fumes will be present: Carbon monoxide, Carbon dioxide, Acetaldehyde.

3. Advice for firefighters

Firefighting instructions: Evacuate personnel to a safe area. Use water spray or fog for cooling exposed containers. Move containers from fire area if it can be done without personal risk. Prevent fire fighting water from entering the environment.

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

6. ACCIDENTAL RELEASE MEASURES

1. Personal precautions, protective equipment and emergency procedures

General measures: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

1.1. For non-emergency personnel

Protective equipment: Wear recommended personal protective equipment.

Emergency procedures: Evacuate unnecessary personnel. Ventilate spillage area. Avoid dust formation. Avoid contact with skin and eyes. Do not touch or walk on the spilled product. Do not breathe dust.

Measures in case of dust release: No flames, no sparks. Eliminate all sources of ignition.

1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

2. Environmental precautions

Avoid release to the environment.

3. Methods and material for containment and cleaning up

For containment: Stop leak without risks if possible. Avoid creating or spreading dust.

Methods for cleaning up: Avoid dust formation. Shovel or sweep up and put in a closed container for disposal. Flush contaminated areas with plenty of water. Use non-sparking tools. Never return spills in original containers for possible later re-use.

7. HANDLING AND STORAGE

1. Precautions for safe handling

Additional hazards when processed: Dust may form flammable and explosive mixture with air.

Precautions for safe handling: Handle under inert gas. Protect from moisture. Wear personal protective equipment. Avoid contact with skin and eyes. Ensure good ventilation of the work station. Keep only in original container. Do not handle until all safety precautions have been read and understood.

Handling temperature: < 50 °C

Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Use good housekeeping practices during storage, transfer, handling, to avoid excessive dust accumulation. Wash contaminated clothing before reuse. Avoid contact with skin, eyes and clothing. Do not breathe dust.

2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed in a cool, well-ventilated place. Protect from moisture.

Incompatible materials: Water, humidity.

Storage temperature: < 50 °C

Storage area: Store according to local legislation.

Packaging materials: Store always product in container of same material as original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

1. Control parameters

Additional information: Contains no substances with occupational exposure limits.

2. Exposure controls

Appropriate engineering controls: Ensure good ventilation of the work station. Assess the risk of potentially explosive atmospheres and the need for explosion-proof equipment.

Environmental exposure controls: Avoid release to the environment.

3. Personal protective equipment

Appropriate engineering controls: Ensure good ventilation of the work station. Assess the risk of potentially explosive atmospheres and the need for explosion-proof equipment.

Personal protective equipment: Wear recommended personal protective equipment.

Hand protection: Protective gloves

- · Material: Butyl rubber
- · Permeation: 6 (> 480 minutes)
- · Thickness (mm): 0.5
- · Penetration
- · Standard: EN 374

Eye protection: Safety glasses with side shields

- · Field of application: Dust
- · Characteristics
- · Standard: EN 166

Skin and body protection: Long sleeved protective clothing

- · Standard

Respiratory protection: No respiratory protection needed under normal use conditions. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

- · Device: Dust mask
- · Filter type: (FFP2)
- · Condition: Dust protection
- · Standard: EN 149

Environmental exposure controls: Avoid release to the environment.

Other information: Handle in accordance with good industrial hygiene and safety procedures. Always wash hands after handling the product. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Use good housekeeping practices during storage, transfer, handling, to avoid excessive dust accumulation. Wash contaminated clothing before reuse. Do not breathe dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

1. Information on basic physical and chemical properties

Physical state:	Solid
Appearance:	Pellets
Colour:	White, Opaque
Odour:	Odourless
Odour threshold:	Not available
pH:	Not applicable
Melting point:	150 – 230 °C
Freezing point:	Not available
Boiling point:	Not available
Flash point:	Not available
Relative evaporation rate (butylacetate=1):	Not available
Flammability (solid, gas):	Not applicable
Explosive limits:	Not available

Vapour pressure:	Not available
Relative vapour density at 20 °C:	Not available
Relative density:	Not available
Density:	1,2 – 1,3 g/cm³
Solubility:	Insoluble in water
Partition coefficient n-octanol/water (Log Kow):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	> 230 °C
Viscosity, kinematic	Not available
Viscosity, dynamic	Not available

2. Other information

No information available

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions
Conditions to avoid:	Above a temperature of: 230°C / 446 °F. Protect from moisture. Avoid raising powdered materials into airborne dust, creating an explosion hazard
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced
Incompatible materials:	Water, humidity
Possibility of hazardous reactions:	No dangerous reactions known under normal conditions of use,Hazardous polymerisation: Will not occur,When mixed with air and exposed to an ignition source, dust may burn in the open air or explode if confined
Reactivity:	The product is non-reactive under normal conditions of use, storage and transport
Handling temperature	< 50 °C

11. TOXICOLOGICAL INFORMATION

1. Information on toxicological effects

Acute toxicity (oral)	Not available
Acute toxicity (dermal)	Not available
Acute toxicity (inhalation)	Not available
Skin corrosion/irritation	Not available
Serious eye damage/irritation	Not available
Respiratory or skin sensitisation	Not available
Germ cell mutagenicity	Not available
Carcinogenicity	Not available
Reproductive toxicity	Not available

STOT-single exposure	Not available
STOT-repeated exposure	Not available
Aspiration hazard	Not available

2. Most important symptoms and effects, both acute and delayed

Symptoms/effects None known. Non-hazardous substance.

12. ECOLOGICAL INFORMATION

1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, shortterm (acute): Not available

Hazardous to the aquatic environment, longterm (chronic): Not available

2. Persistence and degradability

PLA Neat resin (9051-89-2):

Persistence and degradability: Hydrolyses in hot water. The hydrolysis product is readily biologically degradable. Compostable and biodegradable according to EN 13432, ASTM D6400 and ISO 17088. Decomposes in contact with (hot) water. The hydrolysis product is S-lactic acid which is readily biodegradable.

3. Bioaccumulative potential

No additional information available

4. Mobility in soil

No additional information available

5. Other adverse effects

No additional information available

13. DISPOSAL CONSIDERATIONS

Regional legislation (waste): Dispose in a safe manner in accordance with local/national regulations.

Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Do not re-use empty containers without proper cleaning or reconditioning.

14. TRANSPORT INFORMATION

1. National and international Regulations

Not regulated for transport

2. Other information

No additional information available

15. REGULATORY INFORMATION

Brazil Local Regulations: Standard ABNT NBR 14725.
Federal Decree no. 2.657, of 3 July 1998 – Promulgates Convention no. 170 of the WLO, relating to Safety in the Use of Chemicals in the Workplace, signed in Geneva, on 25 June 1990.
Ministerial Order no. 229, of 24 May 2011 – Modifies Regulatory Standard no. 26
Resolution no. 5232, of 14 December 2016, approving the supplementary instructions to the Regulation on the Inland Transport of Dangerous Goods and other provisions.

Regulatory reference: Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian DSL (Domestic Substances List)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (National Chemicals Inventory)

16. OTHER INFORMATION

Abbreviations and acronyms:

NOAEL - No-Observed Adverse Effect Level
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DOT - Department of Transportation (DOT)
DNEL - Derived-No Effect Level
DMEL - Derived Minimal Effect level
EC50 - Median effective concentration
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
LC50 - Median lethal concentration
vPvB - Very Persistent and Very Bioaccumulative
TLM - Median Tolerance Limit
STP - Sewage treatment plant
SDS - Safety Data Sheet
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
PNEC - Predicted No-Effect Concentration
PBT - Persistent Bioaccumulative Toxic
NOEC - No-Observed Effect Concentration
OECD - Organisation for Economic Co-operation and Development