Technical Data Sheet

AGC-IM108

v.240820

Technical Data Sheet	PLA compound for injection moulding AGC-IM108
Description of properties	AGC-IM108 is a thermoplastic compound based on Polylactic Acid (PLA) for injection moulding applications. The material is characterised by its impact resistance and stiffness.

General properties	Method	Unit	Value
Density	ISO 1183	kg/dm^3	1.32
MFI (190 °C; 2.16 kg)	ISO 1133	g/10min	17
Volume weight	ASTM D1895	kg/m^3	770
Mould shrinkage	Internal	%	0.3-0.6

Mechanical properties	Method	Unit	Value
Tensile strength at break	ISO 527	MPa	6
Yield strength	ISO 527	MPa	25
Tensile elongation at break	ISO 527	%	17
E-modulus	ISO 527	MPa	2300
Flexural strength	ISO 178	MPa	54
Flexural modulus	ISO 178	MPa	2600
Charpy impact strength (unnotched)	ISO 179	kJ/m^2	170 (partial break)
Shore D hardness	ISO 48-4	-	56

Thermal properties	Method	Unit	Value
Melt temperature	Internal	°C	175
Ball pressure test, <2mm indentation, 1h	IEC 60695-10-2	°C	51
Ball pressure test, <2mm indentation, 1h (annealed at 70°C for 168h)	IEC 60695-10-2	°C	110

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Processing recommendations

- Storage and drying conditions are important for successful processing of the material.
- The rotation speed of the screw during feeding of the material shall be low to avoid heat of friction. The injection speed can be high, but it requires good venting of the mould.

Zone	Temperatures (°C)
Feed zone	25
Zone 2	180
Zone 3	180
Zone 4	180
Zone 5	190
Nozzle	190
Mould	30

Drying of pellets

- It is very important to dry the pellets prior to extrusion. Moisture causes hydrolysis of the polymer during melt processing resulting in deviations in processing performance and reduced mechanical performance of the finished part.
- Drying at 85 °C in a dry-air dryer. Measure the moisture content after drying to verify sufficiently low moisture content.
- The moisture content shall not exceed 0,05% after drying.

Storage of pellets

- Avoid direct contact with air and light.
- It is recommended to keep the packaging sealed until the material is to be used and to reseal the packaging after usage to avoid moisture uptake.

Recommended

- It is recommended to measure the actual melt temperature with a hand-held device before starting production to check if heat of friction occurs.
- Long time stagnation of the material in the cylinder shall be avoided as this can cause degradation. Purging of the cylinder can be made with a low flow PE-HD.

OBS

- The information submitted in this document is based on our current knowledge and experience.
- In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments.

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