

ISSUED DATE: MARCH 2022

ISO 9001

CHARACTERISTICS

INZEA F29 HT10 is a thermoplastic material, with improved high temperature behaviour, registered by Vinçotte as compostable, within a maximum thickness according to EN 13432. The renewable content is 84%. INZEA F29 HT grades are suitable for injection and extrusion applications. They can be processed in conventional equipment for polyolefins, PS and PA6. For further information, please contact NUREL.

PROPERTIES

PHYSICAL PROPERTIES	CONDITIONS	TEST METHOD	UNIT	INZEA F29 HT10
% Biobased content			%	84
Melt Volume Rate	210°C 2,16 Kg	ISO 1133	cc/10min	25
Density	23°C, 50% HR	UNE-EN ISO 1183-1	g/cm ³	1.32
Moisture content		NAPPA-032	%	<1
Melting Temperature (DSC)	10°C/min	ISO 3146	°C	175-180
MECHANICAL PROPERTIES (Molded amorphous with 25°C mould temperature)				
Moulding Shrinkage	longitudinal transversal	UNE-EN ISO 294-4	%	0.38 0.28
Heat Deflection Temperature (HDT)	0,45 Mpa	ISO 75-1/-2	°C	64
Tensile modulus	23°C, 1mm/min	ISO 527-1/-2	MPa	4200
Tensile strength	23°C, 50mm/min	ISO 527-1/-2	MPa	51
Elongation at yield	23°C, 50mm/min	ISO 527-1/-2	%	2
Elongation at break	23°C, 50mm/min	ISO 527-1/-2	%	4.7
Flexural modulus	23°C, 2mm/min	ISO 178	Mpa	4100
Flexural strength	23°C, 2mm/min	ISO 178	MPa	64
Charpy notched impact strength	23°C	ISO 179/1eA	kJ/m ²	3.7
MECHANICAL PROPERTIES (Molded crystalline with 100-120°C mould temperature or cold mould injection + reheating in an oven)				
Moulding Shrinkage	longitudinal transversal	UNE-EN ISO 294-4	%	1.54 1.35
Heat Deflection Temperature (HDT)	0,45 Mpa	ISO 75-1/-2	°C	110
Tensile modulus	23°C, 1mm/min	ISO 527-1/-2	MPa	4400
Tensile strength	23°C, 50mm/min	ISO 527-1/-2	MPa	52
Elongation at yield	23°C, 50mm/min	ISO 527-1/-2	%	2.2
Elongation at break	23°C, 50mm/min	ISO 527-1/-2	%	3.1
Flexural modulus	23°C, 2mm/min	ISO 178	Mpa	4100
Flexural strength	23°C, 2mm/min	ISO 178	MPa	75
Charpy notched impact strength	23°C	ISO 179/1eA	kJ/m ²	3

APPLICATIONS

INZEA F29 HT10 can replace HDPE, PP, PS and PA6 in several injection moulding and extrusion applications including disposables such as cutlery, cups, plates, cosmetic packaging, and durables such as electronics housings and semi-durable building materials. It is specially recommended when resistance against temperature is needed.

INZEA product range is suitable for Food Contact applications according to regulation 10/2011. This regulation depends on the final application, for further information please contact Nurel.

FORMAT AND STORAGE

INZEA F29 HT10 is supplied in moisture-proof packaging. Typical formats are aluminium thermosealed Big Bags, Octabins and 25kg bags. All containers are perfectly sealed. The product should be stored in a dry place and opened just before processing.

PROCESSING GUIDELINES

Drying

Material is supplied pre-dried and ready to process. Bags and containers should be stored in a dry place at room temperature. Storage time should not exceed six months. Material from open or damaged containers should be dried in a dry-air dryer at 50°C for a period of 4h. Drying temperatures of above 50°C should be avoided because of agglomerate problems.

Injection Moulding

INZEA follows the general recommendations for any other polymers when it is processed by injection moulding. Note that **INZEA GRADES** are sensitive to temperature. We recommend to avoid higher temperatures than recommended and being long time inside the plastification cylinder when they are being processed

For the **INZEA HT** grades, there are two options to achieve a heat resistant part injected with Inzea:

HOT MOULD INJECTION:

Melt temperature: 190-210 °C

Mold temperature: 100 -120°C

Injection speed: medium to high

Back pressure: moderate

COLD MOULD INJECTION + REHEATING IN AN OVEN

Melt temperature: 190-210 °C

Mold temperature: cold

Injection speed: medium to high

Back pressure: moderate

Reheat to 120°C around 2 to 3 minutes. Time depends on the thickness of the part.

Masterbatches used must be compostable and used following EN 13432. For further information regarding the use of masterbatches and suitable masterbatches in the market, please contact NUREL.

Scraps of INZEA F29 HT can be added to the same grade of INZEA F29 HT raw material at a percentage below 10% without a significant loss of properties. Scraps have to be stored in aluminium thermosealed packaging and storage time should not exceed six months. If it is required scraps can be dried at 50°C.

Note: All recommendations are based on knowledge and experience. The values have been established on standard tests. The figures should be regarded as guide values and not as binding minimum values. As many factors may affect processing or applications, we recommend that you make tests to determine