

Technical data sheet

Product name: Terralene® HD 4527
Date of issue: 30 September 2021

Version: 3.0

Designation of product, preparation and manufacturer

Trade name: Terralene® HD 4527
Use of product: Biobased high density polyethylene for injection moulding applications. Contains mineral fillers. The biobased carbon content (BCC) is 95% (calculated).
Manufacturer: FKUR Kunststoff GmbH
 Siemensring 79
 D - 47 877 Willich
 Phone: + 49 (0) 2154 / 92 51-0
 Fax: + 49 (0) 2154 / 92 51-51
 Mail: info@fkur.com
 Web: www.fkur.com

Mechanical properties

Modulus of elasticity	1,845	[MPa]	ISO 527
Tensile strength	26	[MPa]	ISO 527
Tensile strain at tensile strength	7.5	[%]	ISO 527
Tensile stress at break	23.5	[MPa]	ISO 527
Tensile strain at break	16	[%]	ISO 527
Flexural modulus	1,745	[MPa]	ISO 178
Flexural strain at break	no break	[%]	ISO 178
Flexural stress at 3.5 % strain	25	[MPa]	ISO 178
Notched impact strength (Charpy), RT	2.2	[kJ/m ²]	ISO 179-1/1 eA
Impact Strength (Charpy), RT	36	[kJ/m ²]	ISO 179-1/1 eU

The values listed have been established on standardized test specimens (DIN EN ISO 3167, type A) at standard temperature and humidity conditions.

Physical properties

Melt flow rate (190 °C/2.16 kg)	16	[g/10 min]	ISO 1133
Melting temperature	130 - 140	[°C]	ISO 3146-C
Density	1.07	[g/cm ³]	ISO 1183

The figures should be regarded as guide values only. Under certain conditions the properties can be influenced to a significant extent by the processing conditions.

Processing and Handling Information

General

Terralene® is a compound mainly based on biobased polyethylene. It can contain additives, fossil polyolefins and reinforcing fillers. Due to its chemical structure it can be seen as drop-in solution to replace fossil polyolefins and shall be handled and processed like standard polyolefins.

Drying

If packed in its original packaging and stored in good conditions drying is not necessary.
 If moisture uptake is too high, Terralene® can be dried at 60 °C for a period of 2 - 4 hours.

Storage

If not specified otherwise product life is 6 month after shipment from Sellers warehouse if product is in its original packaging, stored under dry (max. 70% relative humidity) and dark conditions (not exposed to sunlight at a temperature of 5 °C to max. 30°C (ambient temperature)). It is important to observe that a major drop in external air temperature (e.g. during transportation) can result in a development of water condensate. Prior to the processing of the material, it should be ensured that there is no condensate on the packaged product.

Finished products made from Terralene® shall be stored dry and cold. It is recommended to wrap goods in black PE liners to protect them against moisture and UV radiation. Storage time depends on processing parameters and of climate conditions in the respective area. Because of these essential and complex interacting parameters, FKUR Kunststoff GmbH cannot give any shelf life guarantees for finished products. Please notice that the conditions mentioned above depend on experience of our customers. Each customer should execute individual storage tests according to product specifications and storage requirements.

Technical data sheet

Product name: Terralene[®] HD 4527
Date of issue: 30 September 2021

Version: 3.0

Processing conditions for injection moulding

Machine settings:	Feeding Zone	15 - 40	[°C]
	Zone 1	190	[°C]
	Zone 2	200	[°C]
	Zone 3	210	[°C]
	Machine nozzle	215	[°C]
	Mould temperature	40	[°C]
	Holding pressure level	40 - 70	[%]
	Melt cushion (of volume)	3 - 10	[%]
	Cooling time	15	[s]
	Max. dwell time	300	[s]

General advice: Regrind sprues and runners can be reused at 20%.

Legal notice

Neither FKUR Kunststoff GmbH nor its marketing affiliates shall be responsible for the use of this information or of any product, method or equipment mentioned. Customers must undertake their own determination of this product's suitability and completeness for their own use, for the protection of the environment, for the health and safety of their employees and purchasers of their products. No warranty is made of the merchantability or fitness of any product, and nothing herein waives any of the seller's conditions of sale.

The current version of General Conditions of Sale of FKUR Kunststoff GmbH is valid.

The brands "FKuR - Plastics made by nature" and "Terralene" are registered trademarks of FKUR Kunststoff GmbH, according to the international 'Nice-Classifications' (NCL9).