

Technical data sheet

Product name: Terrasol® C10
Date of issue: 02 June 2020

Version: 1.0

Designation of product, preparation and manufacturer

Trade name: Terrasol® C10
Use of product: Thermoplastic polyvinyl alcohol, suitable for manufacture of water soluble shaped articles by extrusion.
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

Physical properties

Melt flow rate (190 °C/2.16 kg)	0.5	[g/10 min]	ISO 1133
Moisture Content	0.6	[%]	
Melting temperature	186	[°C]	ISO 3146-C
Density	1.26	[g/cm ³]	ISO 1183
Bulk density	706	[kg/m ³]	ISO 60
Pellet size	3	[mm]	ISO 2591

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

Terrasol® is a water soluble thermoplastic polyvinyl alcohol (PVOH). As it is a moisture sensitive material it should be kept in its original packaging.

Drying

Terrasol® does not require drying before use, however it is best to keep the bags sealed until it is used and reseal the bags after use to prevent moisture ingress.

Storage

Terrasol® pellets are packed in aluminium bags. It should be kept in the packaging it was supplied, if repacked then this should ideally be in an aluminium foil bag or thick PE bag and be sealed airtight. Store between 10-35°C and 30-80% relative humidity. Do not store in freezing conditions. It remains stable for at least 12 months in its original container provided it is stored correctly.

Once the packaging is opened the material absorbs moisture and therefore should be processed immediately from previously unopened original containers.

Storage time of the finished products made of Terrasol® 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.

Processing conditions for cast film extrusion

Machine equipment:	Standard polyolefin castfilm line.		
Machine settings:	Feeding Zone	40 - 60	[°C]
	Zone 1	185	[°C]
	Zone 2	190	[°C]
	Zone 3	195	[°C]
	Zone 4	200	[°C]
	Wide slot nozzle	195	[°C]
	Calender roll temperature	50 - 55	[°C]
	Mass temperature	215	[°C]

Technical data sheet

Product name: Terrasol[®] C10
Date of issue: 02 June 2020

Version: 1.0

Purging advice for cast film extrusion

Before production: The barrel should be purged immediately before start-up. Polyethylene can be used as a purging material, using a 2-4 melt flow index LDPE.

During production: Melt temperature during extrusion should not exceed 225°C, because at higher temperatures the material suffers thermal damage, recognizable by yellow discoloration and an increase in melt pressure and torque. Residence time should be held as short as possible, 5-10 minutes at most. Preferably the barrel should be sized such that the residence is small and the PVOH materials should not be left hot in the machine for extended periods.

After production: Following extrusion of Terrasol[®] the extruder must be cleaned with a polyolefin of similar viscosity (e.g. 2-4 melt flow index LDPE). Do not allow PVOH material to remain hot inside the machine for extended periods as the material will degrade.

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 “TERRASOL” are registered trademarks of FKUR Kunststoff GmbH, according to the international 'Nice-Classifications' (NCL9).