



Technical Data Sheet

HydroPol™ 30163

Pellet Specification

Description

HydroPol™ 30163 is a modified co-polymer based on vinyl acetate hydrolysed monomers. HydroPol™ 30163 has been specifically formulated for blown film and may also be used in extrusion coating applications

Properties

Particle Size 4-5 mm

Density 1.12 g/cm³

Peak Melting Temperature 210°C

Melt Flow Rate (230°C and 10kg) 15.8388

Non-Toxic

HydroPol™ 30163 is non - toxic and all raw materials are listed as approved as direct food additives and food contact by EU and US regulatory listings.

Barrier Properties

HydroPol™ 30163 has high resistance to animal, mineral and vegetable oils, aliphatic and aromatic hydrocarbons, ethers, esters and ketones. They also offer excellent barriers to Oxygen.

Biodegradable

HydroPol™ 30163 is inherently biodegradable. Biodegradation has been observed by at least 20 different genera of bacteria and several yeasts and moulds which occur in activated sludge, compost, facultative ponds, landfills, anaerobic digesters and septic systems and in natural soil and aquatic environments. Sturm (aquatic) biodegradation tests show that the formulations degrade in the presence of activated sewage sludge at a similar rate to cellulose.

HydroPol™ 30163 has shown no ecotoxicological effect in

Marine environments according to ASTM D6691.

Testing for Composability and Anaerobic Digestion is ongoing.

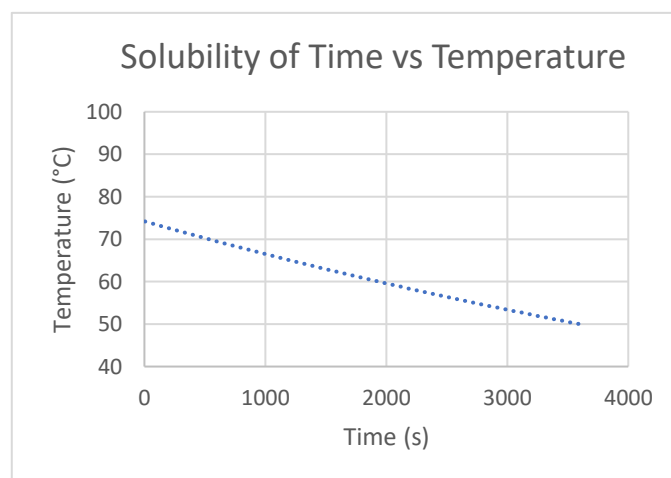
Anti-Static

Because of their high hydroxyl group content and hygroscopicity, HydroPol™ compounds are inherently static dissipative, similar to cellophane, and cause little frictional static charging. Surface resistivities are in the range of 10⁵–10⁶ ohms/m².

Indicative Properties

Solubility

Each grade of HydroPol™ is engineered to solubilise at the maximum temperature for the right application. For example, our medium Hydrolysis variant designed for extrusion coating will more readily dissolve at lower temperatures to ensure 100% solubility when combined with tougher substrates.



Mechanical Property

Unit

Mechanical Property	Unit	Method	MD	CD	Method
Tensile Strength on 32µm film	MPa	Stress at Maximum Load	45.264	41.348	ASTM D882
	%	Elongation at Break	287.257	231.61	
Tear Strength (Elmendorf)	g	MD	TBC	TBC	ISO 6383-2
Burst index	kPa	Paper	TBC	TBC	
Dart puncture on 25µm film	g		518		ISO 2758 and 2759
Coefficient of Friction on 32µm film		Static	0.384	0.390	ASTM 1709
Coefficient of Friction on board		Static	0.467	0.358	ASTM D1894-14
Seal Strength 0.5s @ 180°C	kN/m		TBC		ASTM F88

Barrier Properties

OTR: 0% RH and 23°C on 35 µm film	cc/m ² /24 hr		0.0199		ISO 15105-2
MVTR:	g/m ² /24 hr		TBC	TBC	ASTM F1249
WVTR; 85% RH and 23°C	g/m ² /24 hr	Card	77	Paper	ISO 15106-2
Kit	1-12		12		Tappi T559
Cobb 60s	g/m ²		TBC		ISO 535

All data shown is indicative only. MD = Machine Direction CD = Cross Direction

Storage and Shelf-life

Hydropol pellets have a minimum shelf life of one year if kept in cool, dry conditions with controlled humidity. Packaging should be resealed after opening to protect against moisture.



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Commercial in Confidence

Typical Properties; these are not to be construed as specifications