



## Provisional Technical Data Sheet

### HydroPol™ 33100

#### 1. Description

HydroPol™ 33100 is a modified co-polymer based on vinyl acetate hydrolysed monomers. HydroPol 33100 has been specifically formulated for melt extrusion coating and coex film constructions. It has excellent affinity with other hydrophilic polymers such as cellulose and PLA offering enhanced barrier. HydroPol 33100 as a paper/paperboard coating is designed to Re-pulp in commercial paper recycling systems at 40°C.

#### 2. Properties

Particle Size	4-5 mm
Density	1.12 g/cm <sup>3</sup>
Peak Melting Temperature	185°C

#### 3. Film Properties

Clarity (light transmitted) %	65-70	
Gloss (light reflected) %	85	
Tear Strength (Elmendorf) g	700 g (TD)	ISO 1974
Tensile Strength MPa	20μ 70 (MD) 40(TD)	ISO 527-3
Elongation at break %	250 (TD)	ISO 527-1
DART penetration kg	20μ 0.084	ISO 7765-1



Oxygen Permeability (ml/m<sup>2</sup>/day) \*

0.15

(\* 25μ 50% RH & 23°C)

0.01

(\*25μ 0% RH & 23°C)

Water Vapour Permeability (g/m<sup>2</sup>)

TBA

Moisture Vapour Permeability (g/m<sup>2</sup>)

TBA

Other Barrier

High resistance to animal, mineral and vegetable oils, aliphatic and aromatic hydrocarbons, ethers, esters and ketones.

Static Dissipation Properties

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 10<sup>5</sup>–10<sup>6</sup> ohms/m<sup>2</sup>.



Toxicity.

HydroPol™ 33100 is non-toxic and all raw materials are listed as approved as direct food additives and food contact by EU and US regulatory listings.

Biodegradability.

HydroPol™ is inherently biodegradable. Biodegradation has been observed by at least 20 different genera of bacteria and several yeasts and molds 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.

Testing is underway for Marine, Compostability and Anaerobic Digestion.

