

Water soluble Casting film production:

Poly vinyl alcohol (PVA) is colorless and odorless which is water-soluble. It is also referred to as polyvinyl acetate.

China makes world's 45% of PVA.

The global Polyvinyl Alcohol (PVOH) market stood at approximately 14,00,000 tons in 2022 and is anticipated to grow at a CAGR of 6% during the forecast period until 2032.

Film for packaging made from PVA will have wide scale acceptance world-over.

The use of PVOH is governed by its polymer properties:

- Excellent gas barrier/oxygen barrier
- Film is inherently static dissipative (barrier bags for electronics sensitive to ESD)
- Barrier to oils grease and solvents (allowing unit-dosing and packaging of materials that would destroy other plastics)
- Solubility in water: unit dosing of agricultural chemicals; swimming pool and spa chemicals; personal care items, such as shampoo, conditioner, soap, body wash, hair bleach, lotions and concentrates that can be used as refills and home-mixed water and pre-measured foods or supplements that are mixed or cooked in water
- Controlled solubility, such as laundry bags in hospitals used to hold contaminated linens, clothing and surgical instruments and triggered to dissolve at high washing temperate line,
- Printable and requires no corona treatment
- Odor and perfume barrier properties suited for unit-dose cosmetics
- Injection and blow moldable: can be used in pharmaceutical capsules for human or animal ingestion, a non-animal-derived gelatin replacement

PVOH film has many distinctive and useful properties. It exhibits excellent tensile strength and elongation. It has one of the best oxygen barriers known to science, making it ideal for preventing food spoilage. It also provides a superior barrier to oil grease and solvents, which can damage, adhere to or bleed-through other substrates.

Typical PVOH properties are:

- Tensile strength at a break of 30-100MPa
- Elongation at a break of 100-600%
- Oxygen transmission (38micron,0%RH) of 0.2-5cm³/day/m²/bar

However, most impressive are its biodegradable credentials. PVOH in solution simply breaks down into carbon dioxide and water.

The line that we can offer is 1000 mm wide and 0.02 mm to 0.05 mm thick film making [20 to 50 microns]

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|----------------------------------------------|-------------------|
| Film thickness Production range : | 0.02-0.05 mm |
| Linear speed Range of machine | 1-8 m/min |
| Sample: Thickness | 0.035 |
| Width | 1000 |
| Sample Linear speed | 4 meters / minute |
| Production per year square meters | 1647360 |
| Plant cost USD FOB | 360000 |
| Plant cost INR with duties at 1 USD = Rs. 84 | 41731200 |

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