Polyvinyl alcohol (PVOH, PVA, or PVAl) is a water-soluble synthetic polymer. It has the idealized formula $[CH_2CH(OH)]_n$ = $(C_2H_4O)_x$.

It is used in papermaking, textile warp sizing, as a thickener and emulsion stabilizer in polyvinyl acetate (PVAc) adhesive formulations, in a variety of coatings, and 3D printing. It is colourless (white) and odourless. PVA film is widely used in water-soluble packaging, textile printing and dyeing, agricultural planting and medical materials due to its solubility, biodegradability and environmental protection.

Without an externally added crosslinking agent, PVA solution can be gelled through repeated freezing-thawing, yielding highly strong, ultrapure, biocompatible hydrogels which have been used for a variety of applications such as vascular stents, cartilages, contact lenses.

PVA refers to polyvinyl acetate, which is commonly used as a wood adhesive and sealer. Polyvinyl alcohol has excellent film-forming, emulsifying and adhesive properties. It is also resistant to oil, grease and solvents. It has high tensile strength and flexibility, as well as high oxygen and aroma barrier properties.

Advantages of PVA Cast Film:

- **High Precision & Efficiency** – Ensures uniform thickness and consistent quality with advanced extrusion and casting technology.
- **Eco-Friendly Production** – Produces biodegradable and water-soluble PVA films, reducing environmental impact.
- **Versatile Applications** – Suitable for packaging, agriculture, textiles, medical use, and other functional films.
- **Customizable Design** – Can be tailored to different film thicknesses, widths, and material properties.
- **High Transparency & Strength** – It delivers explicit, durable films with excellent mechanical performance.
- **Energy-Efficient System** – Optimized for low energy consumption and high output.
- **Automated & Stable Operation** – Reduces labor costs and enhances production stability with intelligent control systems.

Applications:

- **Water-Soluble Packaging**
- Used for detergent pods, pesticide packaging, and laundry bags, ensuring safe and precise dosing while reducing plastic waste.
- Helps in single-use packaging for chemicals, preventing direct human contact.
- **Textile and Embroidery Industry**
- Applied as water-soluble embroidery backing for easy removal after sewing.
- Used in fabric printing and dyeing processes to achieve high-quality designs.
- **Agricultural Applications**
- Used for seed tapes and fertilizer packaging, ensuring controlled release and reducing environmental impact.
- Helps in greenhouse films that dissolve after the growing season, making disposal easy.
- **Medical and Pharmaceutical Industry**
- Ideal for unit-dose medicine packaging, ensuring hygiene and precise measurement.
- Used in disposable medical laundry bags to reduce contamination risks.

- **Other Industrial Applications**
- Applied in water-soluble release films for rubber and composite moulding industries.
- Used as an eco-friendly plastic alternative in various specialty applications.

The plant makes 80 to 120 Kg per hour of PVA Film for 0.02 to 0.07 mm thickness and 1200 mm width. The line weight is at about 20 Tons.

The factory size to be made should be 30-meter length [about 100 feet], width of 100 feet and height of 40 feet at one place, say for about 20 feet x 20 feet space at least. [please check the machine picture as above]

This plant suggested is to make the PVA film from Granules.

The business is good because not many involved in BHARAT so far. High industrial demand for the product in case can offer quality made on a high class line.

Do revert in case interested.

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