

DuPont™ Elvanol® 85-91

POLYVINYL ALCOHOL

Product Data Sheet

Description

Elvanol® 85-91 is a medium viscosity tackified polyvinyl alcohol (PVOH) for use in adhesives for cellulosic substrates where a high degree of wet tack and/or water resistance is required. In addition to fast bonding speed, adhesives formulated using Elvanol® 85-91 have good flow properties at high machine speeds. Use of Elvanol® 85-91 eliminates the need for separate handling of boric acid and additional acid for pH control.

Typical Properties of Elvanol® 85-91

Viscosity, cps ¹	1000-16000
Solution, pH	4.0-4.8

¹ Viscosity in mPa.s (cP) of a 10% solids aqueous solution at 25°C

Suggested Uses

Because of their superior wet tack, adhesives based on Elvanol® 85-91 are particularly suited for high-speed tube, core and can winding operations. Elvanol® 85-91 is also used in solid fiber laminating adhesives when improved wet tack is needed.

Elvanol® 85-91 PVOH solutions are prepared the same as other polyvinyl alcohol polymers.

1. Add cool water to the cooker.
2. Begin agitation, generating a vortex.
3. Add Elvanol® and other size ingredients into the vortex. Mix for 2 minutes before using steam.
4. Add live steam to raise the temperature to 90-95°C.
5. Mix and adjust to the desired solids level.
6. Pump to size storage kettle as needed.

FDA Status

Elvanol® 85-91 polyvinyl alcohol complies with U.S. Food and Drug Administration (FDA) Regulations under the following Sections of Title 21 CFR, and may be used in contact with food, subject to the limitations and requirements therein:

- 175.105 - Adhesives

Safety & Handling

Read and understand the Materials Safety Data Sheet (MSDS) before using this product. Elvanol® is technical quality polyvinyl alcohol. It is not recommended for inclusion in any food or preparation that might be taken internally.

Under certain conditions of use, dust may be formed from Elvanol® polyvinyl alcohol. DuPont recommends that dust from Elvanol® be treated as a nuisance dust, which is regulated by the Occupational Safety and Health Administration (OSHA) under Title 29, Code of Federal Regulations, Section 1910.1000. Under this section, an employee's exposure to nuisance dust shall be limited to 15 milligrams per cubic meter (mg/m³) of total dust and 5 mg/m³ of respirable dust on a time-weighted average in any 8-hour shift of a 40-hour week.



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Safety & Handling

The DuPont limit for polyvinyl alcohol exposure to nuisance dust is 10 mg/m³, and for respirable dust is 5 mg/m³. If excessive concentrations of dust are encountered, a mask or respirator and goggles should be worn. The mask or respirator should comply with Section 1910.134 of the OSHA regulations; the goggles should comply with Section 1910.133.

For bulk storage and handling of Elvanol® (e.g. storage silos) refer to *Elvanol® Bulk Storage and Handling Safety Guide*.

Elvanol® may be disposed of by incineration or landfill. However, any disposal method must be in compliance with all applicable local, state and federal regulations.

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