



Kuraray Poval™ in Tissue Applications

kuraray

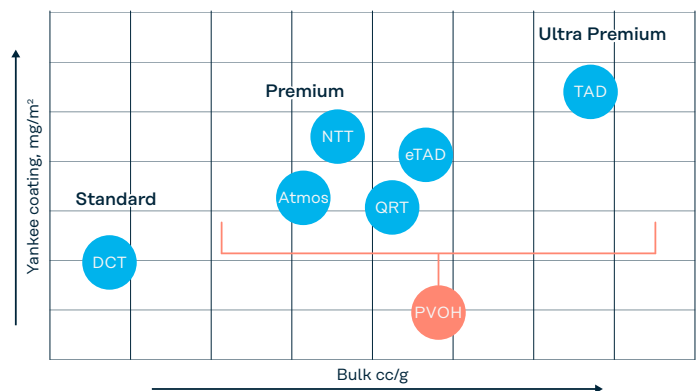
Kuraray Poval™

Meeting the increasing demand for high-quality tissue

The consumption of tissue, including high-quality tissue grades, is growing globally. New technologies have been introduced for the manufacture of these high-quality structured tissue products. In addition to the widely used TAD technology, new technologies like ATMOS, NTT, eTAD and QRT have been brought to the market. A common feature of all these structured tissue technologies is that they require higher amounts of Yankee coating as compared to the conventional Dry Crepe Technology (DCT). Kuraray Poval™ polyvinyl alcohols (PVOH) are playing an important role in the Yankee coating package used in the manufacture of high-quality structured tissue.

Kuraray is the world's leading producer of polyvinyl alcohols, with a vast portfolio of grades sold under the trade names Kuraray Poval™ and Elvanol™. Kuraray has a global sales network with manufacturing and technical service laboratories in Asia, Europe, and the USA. The Kuraray product portfolio includes a wide range of conventional polyvinyl alcohol grades with different degrees of hydrolysis and molecular weights, as well as many modified speciality grades.

Kuraray Poval™ polyvinyl alcohols are used in tissue manufacturing as part of the Yankee coating. In addition Elvanol™ polyvinyl alcohols are used in the converting of tissue products as an adhesive for gluing the tissue paper plies together.



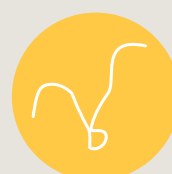
Kuraray Poval™ in Yankee Coating

NTT, eTAD and QRT are technologies from Valmet Oyj and Atmos is a technology from Voith GmbH & Co. KGaA.





New Kuraray Poval™
200-88 KX



Conventional
PVOH

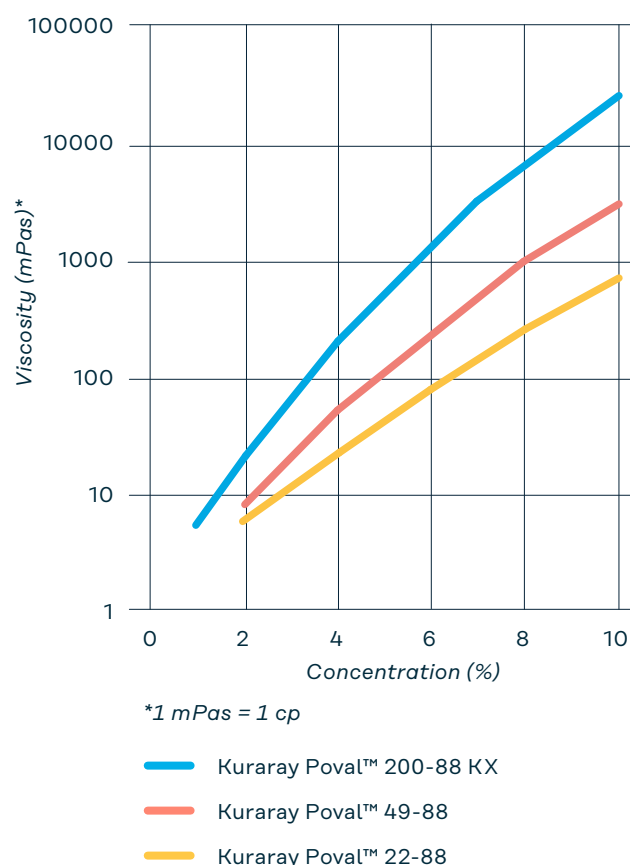
Novel polyvinyl alcohol

Introducing a novel high molecular weight Kuraray Poval™ polyvinyl alcohol for optimized Yankee coating performance

Conventional polyvinyl alcohols are linear nonionic polymers, with the highest molecular weight grades having viscosities up to 100 mPas in a 4% solution in water. Kuraray has developed a novel ultra-high molecular weight polyvinyl alcohol grade with a branched structure.

The new Kuraray Poval™ 200-88 KX grade, with a 4% viscosity around 200 mPas, provides a more shear thinning rheological behavior together with an increased extensional viscosity.

Kuraray Poval™ 200-88 KX gives a wider operating window and improved sheet pick up at the Yankee dryer, yielding improved paper machine runnability. This improved runnability increases machine productivity and enables the reduction of the Yankee coating amount needed.



Kuraray's polyvinyl alcohol products recommended for tissue manufacturing

Product	Viscosity, 4% solution, mPas	Degree of hydrolysis, mol %
Kuraray Poval™ 4-88	4	88
Kuraray Poval™ 22-88	22	88
Kuraray Poval™ 49-88	49	88
Elvanol™ 90-50	15	99
Elvanol™ 71-30	28	99
Kuraray Poval™ 200-88 KX	200	88

Adding value to your products – worldwide

KURARAY POVAL™, EXCEVAL™, ELVANOL™, and MOWIFLEX™ are the trademarks for polyvinyl alcohols (PVOH) made by Kuraray. Their key characteristics — outstanding film-forming properties and high binding strength — add real value to your products. Our polymers are water-soluble, highly reactive, crosslinkable and foamable. They have high pigment binding capacity, protective colloid characteristics and thickening effects. The physical and chemical properties of KURARAY POVAL™ make it ideal for a wide variety of applications, ranging from adhesives through paper and ceramics to packaging films. Many of our polymers are food contact-approved and thus suitable for food applications.

Kuraray produces its wide range of KURARAY POVAL™ grades in Japan, Singapore, Germany and the USA. Kuraray's global production and service network make us your partner of choice for innovative high-quality PVOH resins.



Kuraray Poval™

PLEASE CONTACT US
kuraray-poval.com

kuraray

HEADQUARTERS

Kuraray Co., Ltd.

Tokiwabashi Tower
2-6-4, Otemachi
Chiyoda-ku
Tokyo, Japan 100-0004

Kuraray America, Inc.

3700 Bay Area Blvd.,
Suite 680 Houston, TX 77058
United States of America

Kuraray Asia Pacific Pte., Ltd.

1 North Buona Vista Link
#12-10/11, Elementum
Singapore 139691

Kuraray Europe GmbH

Philipp-Reis-Str. 4
65795 Hattersheim am Main,
Germany

Kuraray China Co., Ltd.

Unit 2207, 2 Grand Gateway
3 Hongqiao Road, Xuhui District, Shanghai
200030, China

DISCLAIMER

KURARAY POVAL™, EXCEVAL™, ELVANOL™, and MOWIFLEX™ are the trademarks or registered trademarks of Kuraray or its affiliated companies. The information, recommendations, and details in this document are provided based on sufficient consideration to the best of Kuraray's knowledge. However, they are not intended to guarantee any characteristics beyond the product specifications. Customers should verify the suitability of our products for their intended use and compliance with relevant laws and regulations. Neither Kuraray nor any of its affiliated companies makes any warranty or responsibility for any errors, inaccuracies, or omissions in this document.