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Adding value to your products - worldwide

KURARAY POVAL™, EXCEVAL™, ELVANOL™ and MOWIFLEX™ are the trademarks for polyvinyl alcohols 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. Ecologically KURARAY POVAL™ is advantageous due to its biodegradability and the fact that combustion does not generate residues. It is available in various particle sizes from granules to fine powders.

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 - Here to Innovate.

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KURARAY POVAL™ LV-Grades

A biodegradable and sustainable polymer for personal care applications

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KURARAY POVAL™ LV-grades

KURARAY POVAL™ LV-grades have been specially designed for cosmetic and personal care applications. For these grades we have compiled adapted regulatory brochures/ dossiers and give statements on: Nanomaterials, Heavy metals, Micro-plastics, Fragrances, Methanol, Animal testing and Biodegradation. The KURARAY POVAL™ LV-grades are produced under GMP conditions and have a specified Methanol (MeOH) content below 0,3% ex Germany and even below 0.1% ex Japan.

Polyvinyl alcohol is a nonionic water soluble polymer that is well suited for water based cosmetic and personal care products. Polyvinyl alcohol is a linear and crystalline polymer that is also biodegradable under the right conditions.

Functionalities

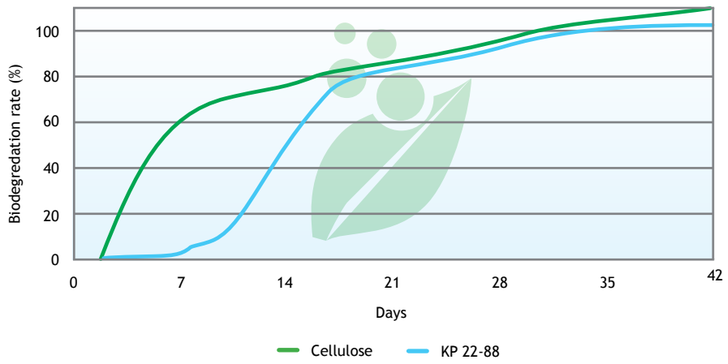
- Film former
- Adhesion promotor
- Encapsulater
- Emulsifier
- Lubricant
- Viscosity controller

Applications

- Skin care (peel off mask, etc.)
- Color cosmetics (mascara, brows, etc.)
- Sun care
- Hair care (hair colorant, shampoo, etc.)

Biodegradability of KURARAY POVAL™ LV-grades

Polyvinyl alcohol (PVOH) is recognized as one of the very few vinyl polymers which is water soluble and biodegradable in water in the presence of suitably acclimated micro-organisms. Also KURARAY POVAL™ LV is biodegradable according to ISO 14851. This has been confirmed by internal tests as well as at external laboratories.



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KURARAY POVAL™ LV-grades for personal care

Methanol ≤0.3 wt% (product made in Germany)

Grade name (tentative)	Viscosity[1] [mPa•s]	Degree of hydrolysis [mol%]	Methanol[2] content [%]	Ash[3] content [%]	pH
KURARAY POVAL™ 4-88 LV	3.5 - 4.5	87.0 - 89.0	≤ 0.3	≤ 0.4	5.0 - 7.0
KURARAY POVAL™ 26-88 LV	24.5 - 27.5	87.0 - 89.0	≤ 0.3	≤ 0.4	5.0 - 7.0
KURARAY POVAL™ 40-88 LV	38.0 - 42.0	87.0 - 89.0	≤ 0.3	≤ 0.4	5.0 - 7.0
KURARAY POVAL™ 49-88 LV	45.0 - 52.0	87.0 - 89.0	≤ 0.3	≤ 0.4	5.0 - 7.0

Methanol ≤0.1 wt% (product made in Japan)

KURARAY POVAL™ 22-88 LV	20.5 - 24.5	87.0 - 89.0	≤ 0.1	≤ 0.4	5.0 - 7.0

1) of a 4% aqueous solution at 20°C DIN 53015 / JIS K 6726 2) Kuraray method by HS-GC 3) calculated as Na_2O

Case study - facial / peel off mask

Both formulations give peel-off masks with even coverage, easy to apply, quick drying time and mechanical properties allowing the removal of the masks in one piece. They represent a good starting point for the formulation of commercial peel-off masks.

pH.	Ingredients (Trade names)	Ingredients (Inci Names)	%W/W	
			FR-0256H-19049	FR-02560-19091
A	Water	Water	60,40	58,20
	Xanthan Gum FNPC	Xanthan Gum	-	0,20
	Glycerin	Glycerin	5,00	5.00
	KURARAY POVAL™ 26-88 LV	Poyvonyl alcohol	2,00	2,00
	KURARAY POVAL™ 49-88 LV	Polyvinyl alcohol	10,00	10,00
B	Water	Water	5,00	5,00
	Butylene Glycol	Butylene Glycol	2,00	2,00
	Polyglykol 15005	PEG-32	5,00	5,00
C	NEOFECT 304	Benzyl Alcoho, Caprylyl Glycol	0,60	0,600
D	Alcohol	Alcohol	10,00	10,00
E	BK Bright Fire Red DCS	Synthetic Fluorphlogopite, Iron Oxieds, Dimethicone, Triethexycaprylylsilane	-	2,00
			Transparent mask	*Metallic colored mask for good skin coverage*