

Polyester Resins Removable with Water or Alkaline water

Corporate
Website
Product
information



PLAS COAT Z-221 • Z-561 • Z-446 • Z-730 • Z-760

- ◆ PET-based **monomaterial**.
- ◆ Suitable for use as a **deinking primer** or **(alkaline) water-soluble protective film**.
- ◆ Environmentally friendly, **low VOC**.
- ◆ Excellent transparency after coated.
- ◆ Application: deinking primer, (alkaline) water-soluble protective film etc.

General properties

	Z-221	Z-561	Z-446	Z-730	Z-760
Solid content	20%	25%			
Solvent	Water:80%	Water:75%		Water:74.1 ~ 75.0% IPA:0 ~ 0.9%	Water:70% ETB:5%
Appearance	Light yellow liquid	Light blue-white liquid	Light yellow liquid	Light blue liquid	
Product viscosity (mPa·s/20°C)	5	15	25	10	10
pH (10% aq)	4.5 ~ 6.5	5.0 ~ 7.0		6.5 ~ 8.5	
Tg	47°C	64°C	47°C	46°C	52°C
Acid value (mgKOH/g)	10 or less			40 ~ 60	40 ~ 55
Water-soluble functional group	SO ₃ Na			COOH	

※IPA: Isopropyl alcohol (CAS No.:67-63-0) ※ETB: Ethylene glycol mono-tert-butyl ether (CAS No.:7580-85-0)

Deinking Evaluation

Resins Containing SO₃Na Group

- Resins Containing SO₃Na Group exhibit good solubility in hot water.
- PLAS COAT Z-221 can remove the ink layer with cold water.
- PLAS COAT Z-561 and Z-446 have a certain degree of water resistance compared to Z-221.
- Solubility in hot water : Z-221 > Z-561 > Z-446.

	Primer Layer			
	none	Z-221	Z-561	Z-446
70°C, Hot water				
40°C, Hot water				
25°C, Water				

※Stirring speed: 100rpm, Stirring time: 5 min

Resins Containing COOH Group

- Resins Containing COOH Group exhibit good solubility in a 1.0 wt% NaOH aqueous solution.
- Ink layer can be removed with a 1.0 wt% NaOH aqueous solution at around 40°C.
- PLAS COAT Z-730 and Z-760 are water-resistant and do not dissolve in water or hot water.

	Primer Layer		
	none	Z-730	Z-760
70°C, NaOH aq (1.0 wt%)			
40°C, NaOH aq (1.0 wt%)			
25°C, NaOH aq (1.0 wt%)			

※Stirring speed: 100rpm, Stirring time: 5 min

Film image diagram

Without Primer Layer	With Primer Layer
Black Ink Layer: 5μm	Black Ink Layer: 5μm
Substrate (PET film): 100μm	Primer Layer: 2μm
	Substrate (PET film): 100μm

- Substrate: Untreated biaxially oriented PET film (Thickness 100μm)
- Coating drying condition: Black Ink Layer: 60°C×5 min, dry thickness about 5μm
Primer Layer: 120°C×5 min, dry thickness about 2μm

