



GOO CHEMICAL CO.,LTD.



Water soluble Polyester co-polymer

PLAS COAT series



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Regarding PLAS COAT

PLAS COAT is the aqueous Polyester resin that is made from our company's unique technology without using the surface-active agent such as surfactant and disperse agent.

This resin is the saturated co-polymer of Terephthalic acid base. Since we can polymerize hard segment, soft segment and water soluble monomer at our will, we can obtain different types of resins, from hard to soft one, from water soluble to water insoluble one, or wax type one, as per customer's requirement.

PLAS COAT can be applied to the process of textile, film, paper, paint, ink, metal among others. We can develop all kind of trial products by our original molecular design in order to fill the new demands.



Characteristic of PLAS COAT

1. PLAS COAT has **superior adhesive** with various kind of materials, particularly with the resin materials (Polyester, Vinyl chloride, Polycarbonate) and the metallic materials (Aluminum, Copper etc).
2. PLAS COAT has **superior weather resistance**, since it does not contain double bond in its saturated polyester resin.
3. PLAS COAT forms **transparent film** after drying..
4. PLAS COAT has Hydroxyl Group or Carboxyl Group in the end of its molecule, so that when it is reacted with the hardener of water soluble type and dispersing type, it obtains **more hardness, more endurance and superior heat-resistance**.
5. PLAS COAT has **superior non-flammability**, due to its self-extinction characteristic, which can not be seen at Acrylic resin or Vinyl acetate.

PLAS COAT Product Catalogue

1. Properties of solution

➤ Non solvent grade

Brand	Appearance	Solid amount (weight%)	Viscosity (mPa·s/20 °C)	pH	Ionic nature	Solvent
Z - 221	Light yellow	20	5	5 ~ 7	Anion	Non
Z - 446	Light yellow	25	25	5 ~ 7	Anion	Non
Z - 561	Light blue	25	15	5 ~ 7	Anion	Non
Z - 687	Light blue	25	80	5 ~ 7	Anion	Non

➤ Water resistance grade (nonflammable)

Brand	Appearance	Solid amount (weight%)	Viscosity (mPa·s/20 °C)	pH	Ionic nature	Solvent
Z - 565	Light blue	25	15	6 ~ 8	Anion	TC: 4 ~ 5%
Z - 690	Light blue	25	25	5 ~ 7	Anion	TC: 9 ~ 10%
Z - 880	Light yellow	25	30	5 ~ 7	Anion	TC: 10 ~ 11%
Z - 3310	Light blue	25	300	5 ~ 7	Anion	TC: 9 ~ 10%
RZ - 105	Light blue	25	70	5 ~ 7	Anion	TC: 9 ~ 10%
RZ - 570	Light blue	25	50	5 ~ 7	Anion	TC: 9 ~ 10%

TC: Ethylene glycol mono-t-butylether

➤ Reactivity grade

Brand	Appearance	Solid amount (weight%)	Viscosity (mPa·s/20 °C)	pH	Ionic nature	Solvent
Z - 730	Light blue	25	5	6 ~ 8	Anion	Non
Z - 735	Light blue	25	10	6 ~ 8	Anion	IPA: 2 ~ 3%

IPA: Isopropyl alcohol

➤ Soil release grade

Brand	Appearance	Solid amount (weight%)	Viscosity (mPa·s/20 °C)	pH	Ionic nature	Solvent
FR - 550	Milk white yellow	20	300	5 ~ 7	Nonion	Non
FR - 627	Milk white yellow	10	150	5 ~ 7	Nonion	Non

2. Properties of resin (1)

➤ Non solvent grade

Brand	Hardness		Tensile breaking strength (kg/cm ²)	Tensile breaking ductility (%)	Tg ()	Softening Point ()	Acid Value (mgKOH/g)
	Shore D	Pencil					
Z - 221	75	2H	150	2	47	135 ~ 140	< 5
Z - 446	80	2H	200	5	47	115 ~ 125	< 5
Z - 561	90	5H	300	1	64	170 ~ 175	< 5
Z - 687	85	4H	300	1	110	185 ~ 200	< 5

➤ Water resistance grade (nonflammable)

Brand	Hardness		Tensile breaking strength (kg/cm ²)	Tensile breaking ductility (%)	Tg ()	Softening Point ()	Acid Value (mgKOH/g)
	Shore D	Pencil					
Z - 565	90	5H	300	1	64	170 ~ 175	< 5
Z - 690	85	4H	350	1	110	185 ~ 205	< 5
Z - 880	50	B	50	1000	20	85 ~ 95	< 5
Z - 3310	25	6B	10	2000	- 20	70 ~ 80	< 5
RZ - 105	80	2H	250	3	52	130 ~ 135	< 5
RZ - 570	85	4H	300	2	60	160 ~ 170	< 5

➤ Reactivity grade

Brand	Hardness		Tg ()	Softening Point ()	Acid Value (mgKOH/g)
	Shore D	Pencil			
Z - 730	80	H	46	80 ~ 85	40 ~ 60
Z - 735	80	2H	47	80 ~ 85	20 ~ 40

➤ Soil release grade

Brand	Hardness		Softening Point ()	Acid Value (mgKOH/g)
	Shore D	Pencil		
FR - 550	35		55 ~ 60	< 10
FR - 627	35		50 ~ 55	< 10

3. Properties of resin (2)

Brand	Molecular weight	Water resistance		Solvent resistance				
		Water	Boiling Water	Toluene	MEK	Ethyl acetate	Ethyl alcohol	Hexane
Z - 221	14,000	×	×					
Z - 446	16,000		×					
Z - 561	27,000							
Z - 687	26,000							
Z - 565	25,000							
Z - 690	28,000							
Z - 880	15,000			×	×	×		
Z - 3310	15,000			×	×	×		
RZ - 105	16,000							
RZ - 570	23,000							
Z - 730	3,000			×	×	×		
Z - 735	3,000			×	×	×		

【 Water resistance 】

Conditions of making film : Coating on P E T film and Heating at 100 °C × 10minutes.

Evaluation : Water ; Observing changes in its appearance after the film was sunk below the surface of water (25 degree) during 24 hours.

Boiling Water ; Observing changes in its appearance after the film was sunk below the surface of Boiling Water during 30 minutes.

Unchanged , Changed to white tint , × Dissolved

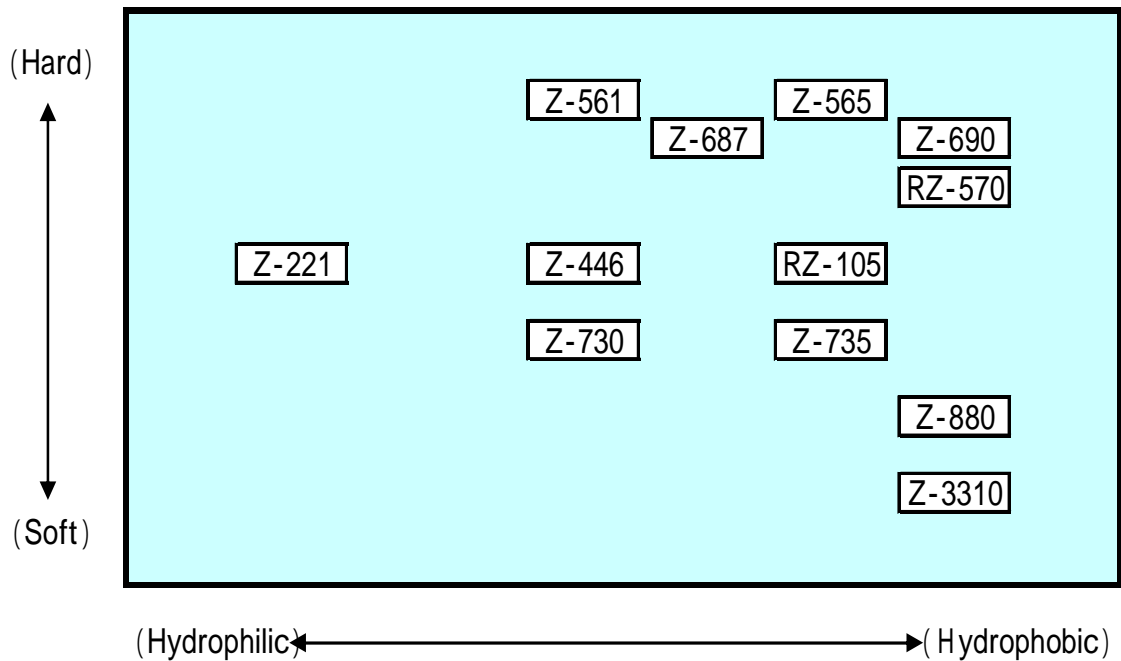
【 Solvent resistance 】

Conditions of making film : Coating on P E T film and Heating at 100 °C × 10 minutes

Rubbing test : Observing changes in its appearance after rubbing on the film with an absorbent cotton containing each Solvent.

Unchanged , Changed to white tint , × Dissolved

Product chart



Application

➤ Textile

PLAS COAT is used at adjustment of the touch feeling, filling process when getting Flame-proof property on textiles, making use of its nonflammable, adhesive, and hardness characteristics.

➤ Film

Used for changing property of the film by coating on the surface of the PET film.

PLAS COAT has an improving effect for printing by coating few micron hydrophilic polymer on the surface of film.

➤ Soil release

Polyester fiber is easy of soiling and electrification because it is heavy hydrophobic and non absorbent. PLAS COAT FR series is used for preventing soiling and electrification by adding water intimateness to the fiber.



Notice

- ◆ This catalogue shows our products for industrial use, intended to be sold to manufacturers and business companies.
- ◆ The results mentioned on this catalogue are information, not warranted.
- ◆ It is necessary to confirm by previous test, if it will have required effect and performance for the aim and condition, before the use.

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