

WP-850A

1. INTRODUCTION

Waterborne Saturated Polyester Resin

2. SPECIAL FEATURES

WP-850A is a saturated polyester resin suitable for preparing environmentally friendly water dispersible air dry or baking inks, paints and coatings for wide variety of substrates including pre-treated PET film, PVCs, metals, and glass.

3. APPLICATION

PVC , Metal substrate, Print ink for pre-treat PET film, waterborne coating, Metal, Plastic , Glass baking paint.

4. CHARACTERISTICS OF THE RESIN

ITEM	UNITE	RESULT
Appearance		Translucent Liquid
Color		Max. 3
Solid Contain	%	35±1
Viscosity	mpas in 25 °C	10,000~15,000
Tg	°C	approx.50 (1)
pH value		6~8
Acid value	mgKOH/g	Less than 5 (2)
OH value	mgKOH/g	15-20 (3)
Molecular weight		10,000-15,000 (4)
Co-solvent		BCS

(1) DSC(METTLER) (2) ISO 3682 (3) ISO 4629 (4) GPC

5. PACKAGE

50 or 200 Kg/ drum

6. STORAGABILITY

Stored in a cool and dry place with adequate ventilation

7. REFERENCE FORMULATION

WA-850A Ref. Formulation for Waterborne Silver Baking Paint					
Stage	ITEM	Ratio	Name	Supplier	Note
Dispersing	1 Silver Powder	8	JSC-110-10 μ m	Junchi ChemJ	Waterborn Silver Powder
	2 BCS	2			
Mix by machine	3 Polyester	77.5	WP-850A-35%	Chan Sieh	
	4 Melamine	7.15	Cymel 303	Allnex	
	5 Defoamer	0.2	BYK-028	BYK	
	6 Wetting	0.3	TEGO270	TEGO	
	7 Leveling	0.5	EFKA3772	BASF	
	8 Defoamer	0.2	104E	Air Product	
	9 Orientation	2	AQUATIX 8421	BYK	
	10 Neutralizer		DMEA	DOW	
	11 Water	2.15	H ₂ O		depends viscosity
		100			

Ratio

1. WP-850A-35% / 303 = 80/20 (in Solid)

2. PH=7.5 ~ 8.5 (DMEA)

WP-850A Test Result of Waterborne Silver Baking Paint		
ITEM	Result	Note
Film thickness	15±2 μ m	
Gloss(60°)	> 90°	ASTM D-523
Hardness of coating	H	GB 6739
Impact test (1/5in-1kg-50cm)	Pass	
Cross cut Test	5B	ASTM D3359-02
Alcohol resistance Test	> 200 times	95% Ethanol
Acid resistance Test	≥ 48hr	HCl 5%
Alkali resistance Test	≥ 48hr	NaOH 2%

Coating condition : Viscosity=17±2s (NK-2 Cup)

Curing condition : 160°C *20min

Plastic Paint – Wet to Wet (2C1B)

WP-850A Waterborne Plastic Silver Paint (1K) Ref. Formulation				
Stage	Number	ITEM	Ratio	name
Mix /Stir	1	Polyester	85	WP-850A-35%
	2	DMEA	0.2	Neutralizer
	3	Defoamer	0.2	BYK-028
	4	Wetting agent	0.3	TEGO270
	5	Leveling agent	0.5	EFKA3772
	6	BCS	3	
	7	Sliver	7	JCS110
	8	Orientation	2	BYK-8421
	9	Water	2	Deionized water
			100	

Ratio :

1. Viscosity for spray=15 ±2 s (NK-2 Cup)

2. pH = 7 ~ 8 (DMEA)

3. Substrate : ABS + PC

WP-850A Waterborne Plastic 2KPU Clear Coat Ref. Formulation					
A part				B part	
Sate	Item	Ratio	Name	Bayer2487 Curing agent	
Mix /Stir	1	Acrylic Resin	66		WA-370-50%
	2	Defoamer	0.2		BYK-028
	3	Wetting	0.3		TEGO270
	4	Leveling	0.5		EFKA3772
	5	BCS	3		
	6	Water	30		Deionized water
			100		

Condition :

1. Spray viscosity=25 ±2 s (NK-2 Cup)

2. A part : B part=6 : 1

3. pH=7.5~8.5 (DMEA)

4. A+B part pot life : 4 hours

5. Substrate : ABS+PC

6. VOC : 97g/L (A+B after dilute)

WP-850A Test Result of Waterborne Plastic 2KPU Clear Coat		
ITEM	Result	Note
Film thickness	20±2μm	
Gloss(60°)	>90	ASTM D-523
Hardness of coating	>H	GB 6739
Cross cut Test	5B	ASTM D3359-02
Organic Solvent resistance	> 100 times	Methanol
Baking : 60~80°C*30mins		