

WP-535

1. INTRODUCTION

Waterborne Saturated Polyester Resin

2. SPECIAL FEATURES

Excellent water dispersibility, pigment wettability, and weathering durability; crosslinking with amino hardeners for automotive primer surface, coil, metal, and glass enamels of good metal adhesion, high gloss, fullness, recoatability, and balanced hardness-flexibility performances.

3. APPLICATION

Baking paint for Metal color coat, Coil coating

4. CHARACTERISTICS OF THE RESIN

| ITEM | UNITE | RESULT |
|---------------|---------------|---------------------|
| Appearance | | Light colored clear |
| Color | | Max. 3 |
| Solid Content | % | 75±1 |
| Viscosity | mpas in 25 °C | 5,000~8,000 |
| Tg | °C | 26 (1) |
| pH value | | 3~5 |
| Acid value | mgKOH/g | ≤ 50 (2) |
| OH value | mgKOH/g | 60 (3) |
| Co-solvent | | BCS |

(1) DSC(METTLER) (2) ISO 3682

5. PACKAGE

50 or 200 Kg/ drum

6. STORAGABILITY

Stored in a cool and dry place with adequate ventilation

7. REFERENCE FORMULATION

| WP-535 Baking Paint for metal | | | |
|-------------------------------|-------|-------------------|-------------|
| Stage | Ratio | Name | Supplier |
| White paste | 1 | H ₂ O | |
| | 2 | BCS | BASF |
| | 3 | TEGO750W | TEGO |
| | 4 | 104E | Air Product |
| | 5 | CR-828 | |
| | 100 | | |
| Stirring stage | 1 | WP-535-75% | Chan Sieh |
| | 2 | Cymel 303 | Allnex |
| | 3 | TEGO270 | TEGO |
| | 4 | EFKA3772 | BASF |
| | 5 | BYK-028 | BYK |
| | 6 | 104E | Air Product |
| | 7 | White paste | Chan Sieh |
| | 8 | DMEA | |
| | 9 | H ₂ O | |
| | 100 | | |

Ratio

1. WP-535-75% / 303 = 80 / 20

2. P / B = 1.3 / 1

3. pH = 8 ~ 9

| WP-535 Test Result of film | | |
|------------------------------|-------------|---------------|
| ITEM | Result | Note |
| Film thickness | 20±2 μm | |
| Gloss(60°) | > 90° | ASTM D-523 |
| Hardness of coating | H-2H | GB 6739 |
| Impact test (1/5in-1kg-50cm) | Pass | |
| Cross cut Test | 5B | ASTM D3359-02 |
| Solvent resistance Test | > 100 times | MEK |
| Acid resistance Test | ≥ 48hr | HCl 5% |
| Alkali resistance Test | ≥ 24hr | NaOH 2% |
| Warm water | Pass | 48hr |

Coating condition : Viscosity=25±2s (NK-2 Cup)

Curing condition : 140~160°C *20~30 mins

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| WP-535 Baking Paint for Coill | | | | |
|-------------------------------|-------|-------|-------------------|-------------|
| Stage | Ratio | Name | Supplier | |
| White paste | 1 | 16.64 | H ₂ O | |
| | 2 | 8.26 | BCS | BASF |
| | 3 | 5 | TEGO750W | TEGO |
| | 4 | 0.1 | 104E | Air Product |
| | 5 | 70 | CR-828 | |
| 100 | | | | |
| Stirring stage | 1 | 33.42 | WP-535-75% | Chan Sieh |
| | 2 | 6.27 | Cymel 303 | Allnex |
| | 3 | 0.25 | TEGO270 | TEGO |
| | 4 | 0.42 | EFKA3772 | BASF |
| | 5 | 0.17 | BYK-028 | BYK |
| | 6 | 0.17 | 104E | Air Product |
| | 7 | 53.47 | White paste | Chan Sieh |
| | 8 | 1.67 | DMEA | |
| | 9 | 4.18 | DBCS | |
| | 10 | | H ₂ O | |
| 100 | | | | |

Ratio

1. WP-535-75% / 303 = 80 / 20

2. P / B = 1.2 / 1

3. pH = 8 ~ 9

| WP-535 Test Result of Coil film | | |
|---------------------------------|------------|---------------|
| ITEM | Result | Note |
| Film thickness | 20±2 μm | |
| Gloss(60°) | > 90° | ASTM D-523 |
| Hardness of coating | H-2H | GB 6739 |
| Impact test (1/5in-1kg-50cm) | Pass | |
| Cross cut Test | 5B | ASTM D3359-02 |
| T-bend Test | 0~1T | ASTM-D-4145 |
| Solvent resistance Test | > 50 times | MEK |
| Acid resistance Test | ≥ 48hr | HCl 5% |
| Alkali resistance Test | ≥ 24hr | NaOH 2% |
| Warm water | Pass | 48hr |

Spray : Viscosity=30~120s (NK-2 Cup)