

**POLYURETHANE ACRYLIC RESIN****DOUBLEMER[®] 850****Polyurethane Acrylic Resin****General**

DOUBLEMER 850 is designed for plastic spray coating which provides excellent leveling, significantly reduces surface defeat caused by frame effect. It also offers very good adhesion, good hardness and high toughness with ABS/PC. DOUBLEMER 850 is recommended for use in resin. Because of its excellent compatibility, it can be used in combination with various resins and monomers to enhance their performance.

Specifications

Appearance	white muddy, viscous liquid
Viscosity at 25°C, cps	6000±500
Specific gravity at 25°C	1.082±0.05
Non Volatile	>98%
	(100°C X 10mins weight loss, infrared moisture analyzer)
Functionality, theoretical	5-8

Physical Properties

Hardness	2 – 3 H/1kg at 20 – 30um
Gloss	60°>80 at 20 – 30um
Suitable Substrates	ABS, PC, ABS/PC

Suggested combination for property modification

- 1.increase hardness : DM 588, dosage 10 – 30 wt%(solid content)
- 2.enhance ABS/PC adhesion : DM HDDA 、DM EGDMA 、DM THFA
- 3.enhance PMMA adhesion : DM IBOA 、DM DPGDA 、DM HDDA 、DM MMA 、DM 2-HEA
4. enhance PET adhesion : DM DPGDA 、DM 2-HEA 、DM 013
5. enhance PVC adhesion : DM DPGDA 、DM 2-HEA 、DM 013 、DM HDDA
6. enhance aluminum adhesion : DM 9166(0.1 – 3wt%) 、DM IBOA
7. enhance galvanize tinplate adhesion : DM 9166 、DM 9167 、DM B-CEA
8. increase Water resistance : DM 5191 、DM SMA
9. increase toughness and impact resistance : DM 584 、DM 541
10. increase non-yellowing : CS UV-33 、CN TP-10H
11. increase abrasion resistance : DM THEICTA 、DM TMPTMA 、DM PET5EOTA
12. increase gang-resistant velvet and scratch resistance : DM 901H-35 、PETA
13. enhance pigment dispersion : DM 02C
14. enhance leveling and reduce shrinkage : DM 9011
15. enhance surface smoothness : DM 9135 、DM 9136

Suggested PI's combination

1. Black substrates : Use Doublecure TPO-L in combination with Doublecure 173
 2. White substrates : Use Doublecure 284 in combination with Doublecure 184
 3. Blue substrates : Use Doublecure 200 in combination with Doublecure 173
 4. Transparent substrates : Use Doublecure 184 in combination with Doublecure 173 and Doublecure TPO-L
 5. Standard combination : Use Doublecure 184 in combination with Doublecure 173
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Miscibility

1. Completely miscible : aromatic 、 ester 、 ketone 、 ether 、 acetals 、 multi- functional groups solvent
 2. Partly miscible : isopropanol 、 gasoline 、 glycol
 3. Immiscible : methyl alcohol 、 ethyl alcohol 、 butyl alcohol 、 inorganic solvent
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Recommended operating procedure

1. Clean the substrates, remove the oil (use IPA).
 2. Remove the static electricity and air spray.
 3. Spray: recommended to use IPA: MEK = 1.5:1, adjust the viscosity to 25~35 seconds (IWATA CUP)
 4. IR or hot air circulation, 70~80°C X 3~8 minutes
 5. UV curing, recommended curing conditions: medium pressure mercury arc lamp UVA, instantaneous power: 400- 600mJ/cm²; Cumulative Energy: 800 - 1200 mJ/cm²
 6. Take out the substrates
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For safety reasons

1. Operate in good-ventilation area and equipped with fire-fighting equipments
 2. Avoid vapor inhalation
 3. Avoid contact with eyes 、 skin and clothes
 4. If it gets into the eyes, flush with copious amount of water immediately, then seek medical assistance.
 5. Store in dark place.
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Package

20kgs net/plastic drum

Storage life

12 months

DOUBLEMER is a trade name of Double Bond Chemical Ind. Co., Ltd

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