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Technical Data Sheet

UP-25 Unsaturated Polyester Resin

1. Brief Introduction

UP-25 resin is a pre-accelerated, long-gel time unsaturated polyester resin with low viscosity, good glass fiber wettability, fast curing and air-drying properties. It is suitable for RTM and vacuum infusion forming process, and is used to manufacture glass fiber reinforced plastic fishing boats, auto parts, fan hoods and waterproof boards and other products.

2. The technical data of liquid resin

Item	Unit	Index	Test method
Appearance	—	Purple-red transparent liquid	GB/T 8237.4.1.1
Viscosity	25°C、Pa.S	0.14-0.18	GB/T 7193.1
Acid Value	MgKOH/g	28-34	GB/T 2895
Gel time	25°C、min	50.0-80.0	GB/T 7193.6
Solids content	%	54-60	GB/T 7193.3

Gel time: 55% methyl ethyl ketone peroxide: 1%

3. Casting body performance (for reference only)

Item	Unit	Casting body measured data	Test method	FRP measured data	Test method
Barco hardness		49	GB3854-05	—	GB3854-05
Heat distortion temperature	°C	78	GB/T1634-04	—	—
Bending strength	MPa	128	GB/T2570-95	400	GB/T1449-05

Flexural modulus	MPa	4200	GB/T2570-95	21000	GB/T1449-05
Tensile Strength	MPa	55	GB/T2568-95	420	GB/T1447-05
Tensile modulus	MPa	4200	GB/T2568-95	21000	GB/T1447-05
Elongation at break	%	1.8	GB/T2568-95	2.3	GB/T1447-05
Compressive strength	MPa	—	GB/T2569-95	210	GB/T1448-05
Compression modulus	MPa	—	GB/T2569-95	16000	GB/T1448-05

Remarks:

- ①The sample preparation method shall be implemented according to GB 8237-87.
- ②Curing system: curing agent 55% MEKPO: 1%
- ③Post-curing treatment: 60°C×2 hours + 100°C×2 hours
- ④Glass fiber content: 70±3%

4. Reference recipe

	Portion
UP-25 unsaturated polyester resin	100 copies
Hardener MEKPO	0.8~1.5 copies (depending on the ambient temperature conditions at that time)

5. Transportation and storage

When transporting, it should comply with the regulations on the transportation and loading and unloading of hazardous chemicals in Chapter 5 of the National Regulations on the Safety Management of Chemical Dangerous Goods. The product should be stored in a cool place below 25°C, avoid fire, and isolate heat sources. The shelf life of storage below 25°C is 3 months.