

### Chemical / physical nature:

UP - 110 is an Isophthalic unsaturated polyester resin with high reactivity and consumer's required viscosity. This resin has a high resistance to weather conditions and UV due to its chemical nature and its additives.

### Major application:

UP-110 is intended for production of SMC, BMC due to its high reactivity. Thixotropic resin can be prepared easily and it is compatible with shrinkage reducing agent. In addition low viscos and medium viscos UP-110 resin can be used in composite materials produced by spray and hand lay-up methods

### Technical information:

Specific	Amount	Unit	Standard
Solvent	Styrene		
Appearance			
Solid content	70 + 98	Percent	ISO 3251
Acid Value	Max20	mg KOH/g	ISO 2114
Viscosity of SMC,BMC resin	700-1100	CPS	ISO 2555
Viscosity of spray resin	200-300	CPS	ISO 2555
Viscosity of Hand lay-up resin	400-600	CPS	ISO 2555
Density	1.12 + 0.5%	g/cm3	ISO 1676
Gel time*	12-14	min	*
Exothermic Peak	250 - 285	°C	*
Exothermic Time	200 - 260	Min	*

\*100 gr mixture of resin and hardener at 25 °C

### Properties of cast resin :

Specific	Amount	Unit	Standard
Tensile strength	75 - 85	MPa	ISO 527
Tensile modulus	6-7	MPa	ISO 527
Elongation at break	4-6	Percent	ISO 527
HOT	110 + 2	°C	ISO 75
Hardness	35 Min	Barcol	ASTM D 2583

\*100gr resin with cobalt octoate 1% metal : 1.5% and MEKP:1.5% Post cure: 24 hours at room temperature and 2 hour at 80 'C.

### Storage:

UP-110 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

### Stability:

Under the above mentioned storage condition the stability of UP-110 will be 4 month ex work

