



# Kuwait Chemical Manufacturing Company KSC

الشركة الكويتية للتصنيع الكيماوي (ش.م.ك.)

## TECHNICAL DATA SHEET

27<sup>th</sup> June 2005

### GENERAL PURPOSE POLYESTER RESIN

### KUPOL LR 1400

**Kupol LR 1400** is a versatile, non-accelerated, non-thixotropic, rapid curing unsaturated polyester based on orthophthalic anhydride and specifically designed for use in tropical climates. **Kupol LR 1400** has good mechanical and weathering properties.

#### Physical Characteristics

Parameter	Units	Limits
Non-Volatile Content	%	60 ± 2
Acid Value (as supplied)	mg KOH/g	25 max.
Viscosity (25°C)	cPs	250 - 300

#### Curing Characteristics

Parameter	Units	Limits
Gel Time @ 25°C	Minutes	10 - 15
Cure Time	Minutes	17 - 27
Peak Exotherm	°C	± 180

Curing parameters are determined on a 100 gram sample stabilised at 25°C and catalysed with 2% accelerator (1% Cobalt) and 2% Methyl Ethyl Ketone Peroxide (50%).

#### Application Properties and Areas of Utilisation

**Kupol LR 1400** has been formulated for use in hand or spray lay-up contact moulding applications where mould drainage is not problematic, or in resin injection systems.

**Kupol LR 1400** may be used in any general purpose GRP application where its resilience and impact strength are of benefit. **Kupol LR 1400** also has a fairly low exotherm which enables it to be used in multi-laminate systems where laminates are applied wet on wet. Examples of usage include, but are not limited to, water tanks, boat hulls (fresh water), kiosks and general jobbing. **Kupol LR 1400** should not be used in any applications requiring a high degree of structural stability and mechanical strength.

#### Curing

**Kupol LR 1400** is non-accelerated and requires the addition of both cobalt accelerator and MEKP to affect curing. The cobalt level (as 1% cobalt solution) can be adjusted from 0.5 to 2.5% to meet laminating gel time requirements as dictated by production and environmental constraints. Levels above or below this range are not recommended. Although the product will cure with only 0.5% addition of peroxide, a level of between 1 and 2 % is recommended to achieve optimal mechanical properties.

**Under no circumstances should cobalt accelerator and peroxide catalyst be admixed together because of a potential fire and/or explosion risk.** The required amount of cobalt accelerator should be effectively mixed into the resin first before the addition of the catalyst.

#### Post Curing

**Kupol LR 1400** laminates should be post cured where the highest mechanical properties are required and/or the product comes into contact with potable water or foodstuffs.

#### Packaging

**Kupol LR 1400** is available in 220Kg net mild steel tight head drums or 1400 and/or 1500 Kg stainless steel totes.

#### Storage Stability and Safety

**Kupol LR 1400** is stable for a period of 6 months when stored in its original container out of direct sunlight at temperatures not exceeding 25°C. This product contains styrene monomer and requires special care in handling. Please refer to the MSDS and any local statutory requirements.

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