

## **PRODUCT TECHNICAL DATA**

### **ISOPHALIC BRUSH TOOLING GELCOAT**

**Application:** This product is recommended specifically for the manufacture of GRP moulds. It should be used for open moulds subject to moderate production rates and temperatures.

**Application Characteristics:** Formulated to give excellent brushing properties. Thixotropy has been optimised to minimise sag from vertical surfaces whilst giving good levelling properties. For optimum performance a double layer of gel coat should be applied, with the thickness of the first layer being 0.5 – 0.6mm. After sufficient curing a second layer should be applied and sufficient curing should be allowed before proceeding with the lay-up. Under normal conditions, the curing period required prior to lay-up is approximately 60-90 minutes when using 2% of medium reactivity MEKP catalyst. Post cure of the mould prior to use will enhance its long term performance. The gel coat is available in ready pigmented grey and has been tested for optimum performance.

#### **Principal Properties:**

Isothalic tooling gel coat.  
Good gloss, hardness and scratch resistance.  
Good resistance to styrene monomer.

#### **Principle physical properties:**

TDUL (Iso 75)----->75°C  
Elongation at break (Iso 527)---->3%  
Barcol hardness (934-1)----->40  
Tensile strength (Iso 527)----->65MPa  
Tensile Modulus (Iso 527)----->3.5GPa  
Casting was post cured for 3 hours at 70°C prior to test.

#### **Recommended curing system:**

Medium reactivity MEKP (Peroxide Chemie HA-2 or equivalent) @ 1.5-3%.

Gel time @ 25°C---2% MEKP-----11 minutes.  
Typical film cure time-----60-90 minutes.

#### **Recommended for release systems:**

The release system applied to the pattern / master mould has a critical influence on the successful mould making process. With brush Iso tooling gel coat, many systems have been successfully utilised. These include: 5-7 coats of various Carnauba or blended paste waxes such as Honeywax, Mirroglaze, Simoniz. The instructions for application of each wax should be followed carefully. A minimum of 1 hour should be allowed between coats of wax to allow sufficient hardening, and fully waxed mould should ideally be left overnight before gel-coating to allow for optimum release.

Systems particularly recommended for optimum ease of release are, 7 coats of Honeywax or 4 coats of Honeywax followed by a thin film of PVA release agent. The PVA should be allowed to fully dry for sufficient time as to be sure it is 100% solvent free. This is temperature, humidity and air flow dependant and ideally an overnight drying period is recommended.

Whichever system is adopted, we recommend a small test area should be prepared and the effectiveness of release confirmed before proceeding to a full mould situation.