

## **ADDupol™ GCI-1000-S**

**ISOPHTHALIC  
SPRAY GELCOAT**

### **DESCRIPTION:**

GCI-1000-S gelcoats are high quality coating developed for the fibreglass industry. This gelcoat gives a quality finish, which has good chemical/water resistance, gloss retention, weather ability, and resiliency. This gelcoat is formulated to meet the rigid requirements of transportation, boating, and sanitary applications.

GCI-1000-S gelcoats are ready to use, easy to spray, sag resistant, fast curing and requires only the addition of the proper amount of the appropriate MEKP to cure.

GCI-1000-S gelcoats are available in a wide range of eye-appealing colours. Customer colour matching is available on request.

### **TYPICAL PROPERTIES (@ 25°C)**

These values may or may not be a manufacturing control criteria; they are listed for a reference guide only. Particular batches will not conform exactly to the numbers listed because storage conditions, temperature changes, age, testing equipment (type and procedure) can have a significant effect on test results. Gelcoats outside of these readings can perform acceptably. Final suitability of this product is in the end-use performance.

Viscosity: Brookfield RVF #4 @ 4 rpm	120 – 160 poise
Thix Index #4 @ 2/20 rpm	6.0 – 7.0
Flash Point	28 – 31 °C
Non-volatile Content	58 – 65 %
Specific Gravity	1.28 – 1.32 g/cm <sup>3</sup>
Gel Time @ 1.8% Curox M302	12 – 15 minutes
Lay-up Time	60 – 90 minutes
Sag Resistance	Good at 500 µm
Hide	Complete at 250 µm

### **APPLICATION:**

GCI-1000-S gelcoats are generally formulated for both airless and conventional spray applications. Brushing or rolling is not recommended.

We recommend a gelcoat delivery rate of no more than 1.1 kilograms a minute with conventional air atomised equipment, and no more than 1.8 kilograms a minute with airless equipment.

Batch mixing is recommended to achieve the best catalyst mix and cure because even with the equipment properly calibrated, potential problems can occur due to: poorly atomised catalyst, surging problems (gelcoat or catalyst), poor tip alignment (catalyst to gelcoat mix), contamination, and poor application procedures, which will negate all benefits of calibration. The equipment (and application procedures) must be monitored on a routine basis to ensure proper application and cure of the gelcoat.

For best overall properties, a wet film thickness of  $500\mu\text{m} \pm 100 \mu\text{m}$  is recommended as ideal. Films less than  $400 \mu\text{m}$  may not cure properly, may be hard to patch, have more print-through, and are more susceptible to water blisters. Films above  $600 \mu\text{m}$  may pre-release, trap porosity, crack and are more subject to weathering discoloration. If water blisters are of a great concern (boat hulls), films thicker than  $600 \mu\text{m}$  would perform better, but sag, porosity and cracking resistance could suffer. If weathering (yellowing from sunlight, decks) is of great concern, then films thinner than 400 microns would perform better, but patch ability, print-through and blister resistance could suffer.

Proper mould maintenance is important. Although GCI-1000-S gelcoats have excellent patching properties, minimal repair work is always desirable. Sanding and compounding can hasten the chalking and loss of gloss of all gelcoats.

#### **CURE:**

It is recommended that gel time be checked at the customer's plant because age, temperature, humidity, and catalyst procedure will produce varied gel times.

The catalyst level should not exceed 3% or fall below 1.2% for proper cure. Recommended range is 1.2% to 3.0% with 1.8% at 25°C being ideal. Normally, the gelcoat film is ready for lamination in 60 - 90 minutes. This time element is dependent on material temperature, room temperature, humidity, air movement, and catalyst concentration. Special fast-cure versions are available but must be requested. These products offer lay-up times of about 45 minutes depending on gel times. Fast cure products have shorter stability and should not be inventoried over 45 days.

These products (standard or fast-cure) should not be used when temperature conditions are below 15°C, as curing may be adversely affected.

Do not overmix gelcoats. Over mixing breaks down gelcoat viscosity, increasing tendencies to sag, and causes styrene loss, which could contribute to porosity.

#### **STORAGE LIMITATIONS:**

Un-catalysed, standard cure gelcoats have a usage life of three months from the date of manufacture when stored at 25°C or below, in a closed, factory sealed, opaque container, and out of the sunlight. Fast-cure gelcoats are stable for 45 days. The usage life is cut in half for every 11°C over 23°C.

**ADD RESINS BRANCHES AT:  
JOHANNESBURG / DURBAN / CAPE TOWN**

### **POLYESTER SAFETY INFORMATION**

All sales of products supplied by ADD Resins (Pty) Ltd and described herein are made solely on condition that our customers comply with applicable health and safety laws, regulations and orders relating to the safe handling of our products in the workplace. Before using, read the following information and both the product label and Material Safety Data Sheet pertaining to each product.

Most polyester products contain styrene. Styrene can cause eye, skin and respiratory tract irritation. Avoid contact with eyes, skin and clothing. Impermeable gloves, safety eyewear and protective clothing should be worn during use to avoid skin and eye contact. Wash personal protective equipment thoroughly after use.

Styrene is a solvent and may be harmful if inhaled. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Extended exposure to styrene at concentrations above the recommended exposure limits may cause central nervous system depression causing dizziness, headaches or nausea and if overexposure is continued indefinitely, loss of consciousness, liver and kidney damage.

Do not breathe or ingest vapour, spray mists and dusts caused by applying, sanding, grinding and sawing polyester products. Wear an appropriate OSHA approved, properly fitted respirator during application and use of these products until vapours, mists and dusts are exhausted, unless air monitoring demonstrates vapours, mists and dusts are below applicable exposure limits. Follow respirator manufacturer's directions for respirator use.

The International Agency for Research on Cancer (IARC) has reclassified styrene as Group 2B "possibly carcinogenic to humans". This new classification is not based on new health data relating to either humans or animals, but on a change in the IARC classification system. The Styrene Information and Research Centre does not agree with the reclassification and has published the following statement: Recently published studies tracing 50 000 workers exposed to high occupational levels of styrene over a period of 45 years showed no association between styrene and cancer, no increase in cancer among styrene workers (as opposed to the average among all workers), and no increase in mortality related to styrene.

Styrene is classified by OSHA and the Department of Transport as a flammable liquid. Flammable polyester products should be kept away from heat, sparks and flame. Lighting and other electrical systems in the workplace should be vapour-proof and protected from breakage.

Vapours from styrene may cause flash fire. Styrene vapours are heavier than air and may concentrate in the lower levels of moulds and the work area. General clean air dilution or local exhaust ventilation should be provided in volume and pattern to keep vapours well below the lower explosion limit and all air contaminants (vapour, mists, dusts) below the current permissible exposure limits in the mixing, application, curing and repair areas.

Some polyester products may contain additional hazardous ingredients. To determine the hazardous ingredients present, their applicable exposure limits and other safety information, read the Material Safety Data Sheet for each product (identified by product code) before using.

**FIRST AID:** In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If affected by inhalation of vapours or spray mist, remove to fresh air. If swallowed, get medical attention.

Polyester products have at least two components that must be mixed before use. Any mixture of components will have hazards of all components. Before opening the packages, read all warning labels. Observe all precautions.

Keep polyester containers closed when not in use. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations. Emptied containers may retain hazardous residue. Do not cut, puncture or weld on or near these containers. Follow container label warnings until containers are thoroughly cleaned or destroyed.

**FOR INDUSTRIAL USE AND PROFESSIONAL APPLICATION ONLY. KEEP OUT OF REACH OF CHILDREN.**

### **DISCLAIMER AND LIMITATION OF LIABILITY**

The products sold hereunder shall meet Seller's applicable specifications at the time of shipment. Seller's specifications may be subject to change at any time without notice to Buyer. Buyer must give Seller notice in writing of any alleged defect covered by this warranty (together with all identifying details, including the product code(s), description and date of purchase) within thirty (30) days of the date of shipment of the product or prior to the expiration of the shipment's quality life, whichever occurs first. The warranty described herein shall be in lieu of any other warranty, express or implied, including but not limited to, any implied warranty or merchantability or fitness for a particular purpose. There are no warranties that extend beyond the description on the face hereof.

The Buyer's sole and exclusive remedy against Seller shall be for the replacement of the product or refund of the purchase price in the event that a defective condition of the product should be found to exist by Seller. No other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available to the Buyer.

The sole purpose of this exclusive remedy shall be to provide Buyer with replacement of the product or refund of the purchase price of the product if any defect in material or workmanship is found to exist. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Seller is willing and able to replace the defective products or refund the purchase price.

Final determination of the suitability of the material for the use contemplated, the manner of use and whether the suggested use infringes any patents is the sole responsibility of the Buyer.