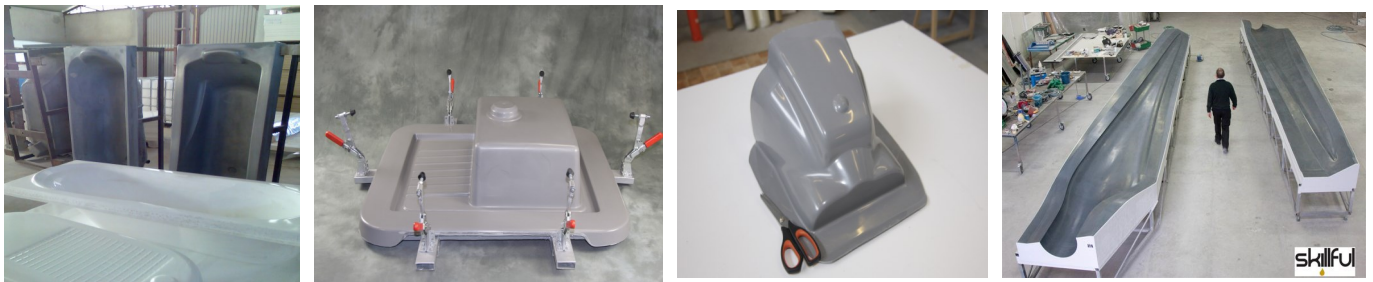


# RESOLCOAT 2060 GC ALU

## Hardeners 2061S & 2066H

### Tooling Aluminium Epoxy Gelcoat

- High gloss surface
- For demanding heat cycles post cures & thermoforming
- High modulus & mechanical properties
- T<sub>G</sub> 115°C with 2061S hardener



**RESOLCOAT 2060 GC ALU / 2061S & 2066H** epoxy gelcoat is formulated for the production of composites tooling. It enables to manufacture tooling that will resist many years to the most demanding heating and cooling post-curing cycles of: **heating RTM & pre-preg tooling, high output heat forming of thermoplastics or polymer concrete/solid surface injection tools.**

Its novolac based formula guarantees the highest mechanical and chemical resistance, notably to styrene. Polyester or vinylester parts manufactured on the 2060 GC ALU gelcoat will release with high gloss for numerous cycles. Should the gelcoat needed to be repaired, polishing the repaired area will enable to regain a high gloss surface aspect.

This new generation system, optimized with **excellent self levelling characteristics and excellent air release**, is suitable for the manufacture of large composite tooling. It can be applied by brush, roller or airless while guaranteeing low toxicity working conditions to the users.

The recommended application thickness ranges from 500 µm to 600 µm at 23°C, which it is possible to achieve in one coat on a vertical surface without sag.

Final thermomechanical properties will be obtained after a post curing cycle defined later in this technical datasheet.

# Gelcoat 2060 GC ALU

Hardeners 2061S & 2066H

## MIXING RATIO

System	2060 GC ALU / 2061S	2060 GC ALU / 2066H
Mixing ratio by weight	100 / 13	

Warning: the mixing ratio must be accurately followed. It is not possible to change the ratio, it would result in lower mechanical properties. The mixture should be thoroughly stirred to ensure full homogeneity. It is important to note that epoxy systems tend to heat up much faster in a pot than as a thin film. It is preferable to only mix the necessary amount usable within the given pot life. Keeping the mixture in flat open containers reduces the risks of exothermic reaction.

## APPLICATION

Thoroughly mix the resin component before pouring in mixing cup. It is recommended to mechanically mix the resin+hardener during 5 effective minutes to ensure correct mixing.

The standard procedure of working with epoxy gelcoats applies this system. The 2060 GC ALU / 2061S or 2066H system can be applied by brush, or roller.

This gelcoat has been formulated for application of 500 to 600 µm without sag on vertical surfaces in one only coat.

**Coverage: 0.8 - 1.0 kg/m<sup>2</sup> for a 500 - 600 µm thickness dry film.**

### Over coating:

As an indication, it is possible to overcoat the gelcoat with a laminating resin as long as the surface still has tack (timing to be defined by workshop temperature & hardener choice).

It is recommended to sand and degrease before laminating onto the gelcoat if the surface has cured and formed its film (tack-free surface).

**Other application methods** such as delaying the gel by applying a coat of ultra slow laminating epoxy resin (**1050 / 1053S RESOLTECH system is recommended for this use**) onto the freshly applied gelcoat is a well proven method and ensures a good chemical bonding with the reinforcement laminated within 24h of the 1050 / 1053S coat.

Lamination of the first layers of reinforcement may be done with the aluminium filled 2060 ALU 25 resin in order to improve mould print-through resistance and better thermal resistance of the mould surface.

In all cases testing in production conditions should be conducted in order to validate the method before industrial size applications.

It is recommended to have workshop temperature conditions between **18-25°C** in order to facilitate the mixing and the application. A lower temperature will increase the viscosity of the mix as well as its pot life. On the contrary, a higher temperature will reduce the viscosity and the pot life of the mix.

# Gelcoat 2060 GC ALU

Hardeners 2061S & 2066H

## PHYSICAL CHARACTERISTICS

### Visual aspect

2060 GC ALU : Grey gel  
2061S & 2066H : Transparent to slightly orange liquid  
Mix : Grey gel

### Density according to ISO 1675 ( $\pm 0.05$ )

References	2060 GC ALU	2061S	2066H	Mix
Density at 23°C	1.74	0.94	0.98	1.65

### Viscosity according to ISO 12058.2 & ISO 2555 ( $\pm 15\%$ tolerance)

References	2060 GC ALU	2061S	2066H
Viscosity at 23°C (mPa.s)	170 000	115	250
Mix viscosity at 23°C (mPa.s)	-	9 500	18 000

## REACTIVITY

Systems	2060 GC ALU / 2061S	2060 GC ALU / 2066H
Gel time on 70mL (4cm thickness) at 23°C	6h30min	57min
Temperature at exothermic peak on 70mL (4cm thickness) at 23°C	NR*	48°C
Time at exothermic peak on 70mL (4cm thickness) at 23°C	NR*	1h
Gel time in 2mm film at 23°C	7h25min	1h50min

Reactivity measurements made on Rheotech®

\*Not Representative

# Gelcoat 2060 GC ALU

Hardeners 2061S & 2066H

## CURING & POST-CURING

2060 GC ALU / 2061S & 2066H will cure at room temperature enabling to release parts from the moulds after 24h of its application. Further post-cure will enable the gelcoat to obtain 100% of its mechanical properties.

Systems	2060 GC ALU / 2061S	2060 GC ALU / 2066H
Tack time	7h	1h45min
Touch dry	11h	5h
Hard & Releasable	30h	16h
Full cure	3h80°C+ 3h120°C	3h60°C+3h90°C

Measurements with polymerization at 23°C

## MECHANICAL PROPERTIES

Systems	2060 GC ALU / 2061S	2060 GC ALU / 2066H
Shore hardness after 3h60°C+3h90°C	91 Shore D	90 Shore D
Shore hardness after 3h80°C+3h120°C	92 Shore D	90 Shore D
T <sub>G</sub> after 3h60°C+3h90°C	88°C	77°C
T <sub>G</sub> after 3h80°C+3h120°C	100°C / 115°C	82°C / 90°C

Shore hardness according to ISO 868

T<sub>G</sub> measurements made on Kinetech® (DMA type) / DSC

# Gelcoat 2060 GC ALU

Hardeners 2061S & 2066H

## PACKAGING

Available kits of 2060 GC ALU / 2061S & 2066H :

- 1.13 kg : (1+0.13) kg
- 5.65 kg : (5+0.65) kg
- 33.9 kg : (30+3.9) kg
- 226 kg : (200+26) kg

## TRANSPORT & STORAGE

Keep containers sealed and away from heat and cold preferably between 10°C and 30°C in a well ventilated area. Our products are guaranteed in their original packaging (check expiry date stated on the label).

## HEALTH & SAFETY

Skin contact must be avoided by wearing protective nitrile gloves & overalls or other protective clothing. Eye protection should be worn to avoid risk of resin or hardener entering the eyes. If this occurs, flush the eye with water for 15 minutes, holding the eyelid open, and seek medical attention. Ensure adequate ventilation in work areas. Respiratory protection should be worn with ABEKP coded filters. RESOLTECH issues full Material Safety Data Sheet for all hazardous products. Please ensure that you have the correct MSDS to hand for the materials you are using before commencing work.

Nota : The data provided in this document are provided good-faith and are based on the test in laboratory and our practical experience and is believed to be accurate. Considering the application of our products gets away from our control, we do not accept any responsibility over the mishandling of these products and our liability is limited strictly to the value of the products we manufacture and supply.