

## Product description - Approvals

CRYSTIC 967 KLV Excel is an isophthalic Neopentyl Glycol gelcoat, thixotropic and pre-accelerated. This gelcoat is to be applied by spray through an airless machine.

CRYSTIC 967 KLV Excel has been specially designed for the production of high quality sanitary items. The chemistry used in this formulation results in an excellent long term resistance to hot water and to thermal shocks and provides a very low level of microporosities.

## Features and Benefits

Features	Benefits
Isophthalic Neopentyl glycol base resin	Excellent resistance to water and chemicals
Easy to apply	Excellent surface finish, less post finishing operations
Enhanced chemistry	Long term resistance to thermal shock

## Spray set up

Application temperature	18 - 25°C
Catalyst	1 to 3% M50
Nozzle airless gun	20/10 to 30/10 mm, or 423 - 535
Pressure	3 to 4.5 bars
Distance to mould	50 cm minimum
Thickness	500 - 800 microns

## Spray Application

Do	Don't
Gently stir the gelcoat by hand or low shear stirrer before use	Exceed a wet film thickness of 0.8 mm as drainage and air retention may occur,
Ensure a gelcoat and a workshop temperature between 15°C – 25 °C	Allow vapor to be retained in deep sections of the mould, this can slow the cure
Spray at the minimum acceptable pressure	Apply excessive gelcoat in corners
Apply the gelcoat in thin and even passes of 200 microns until a film thickness of 0.6 – 0.8 mm is reached	Wait for more than 24 hours before applying the first GRP layer
Ensure adequate mould ventilation	Work at temperature below 15°C
Apply the first lamination layer within 24 hours	.

## Additives and variants

Incorporation of additional material may affect the working, weathering or cured properties of the gelcoat. Please check with Scott Bader's Technical Service before using the gelcoat outside the specified parameters.

## Post-Curing

For most applications satisfactory result will be obtained by curing at room temperature (20°C). Some improvement in properties may be obtained by post-curing. We then recommend a maturation of 24 hours at room temperature after release from the mould. then 16 hours at 40°C

## Recommended Testing

It is recommended that customers test all gelcoats before use under their own conditions of application to ensure that the product meets requirements.

### Typical properties - uncured

Viscosity at 25°C, Brookfield Sp5, 2,5 Rpm	dPa.s	180 – 220
Thixotropic index 2,5 Rpm / 20 Rpm		5.1 – 5.5
Stability under recommended storage conditions	month	5
Specific gravity ( varies with the colour) average at		1.18
Styrene content	%	32 - 33

### Typical properties cured (\*)

Barcol hardness (model GYZJ 934-1)	EN 59		45
Heat deflection temperature (1,8 Mpa) **	BS EN ISO 75-2 1996	°c	90
Elongation at break	BS EN ISO 527-2	%	2.5
Tensile strength	BS EN ISO 527-2	MPa	50
Tensile modulus	BS EN ISO 527-2	MPa	3400

1MPa = 1MN/m<sup>2</sup> = 1N/mm<sup>2</sup> = 10,2 kgf/cm<sup>2</sup> (\*) post curing of 24h at ambient temperature then 16h at 40°C

(\*\*) Post curing of 24h at ambient temperature then 5h at 80°C then 3 h at 120 °C

### Gel Time and back up time

Catalyst level and temperature will influence the gel time. The product only requires the addition of catalyst to start curing. We recommend the use of a 50% MEKP ( type Butanox M50 or equivalent) which should be added at 1 to 3 % in the gelcoat.

Temperature	Gel time (2% Butanox M-50)	Back up time (2 % Butanox M-50)
20 °C	~ 9 - 11 min	~ 45 – 50 min
25 °C	6 - 9 min	~ 36 – 47 min
30 °C	~ 4 - 6 min	~ 25 - 35 min

### Packaging and Storage

CRYSTIC 967 KLV Excel is available in 25 kg kegs and 225 kg drums.

CRYSTIC 967 KLV Excel should be stored in its original container and out of direct sunlight. These must be kept closed and airtight. The storage temperature should be between 10 - 25°C where practical, and should not exceed 28 °C. Storing the gelcoat at temperature above 28 °C will modify its properties and will reduce its shelf life. Containers should be opened only immediately prior to use.

### Health and safety

Read and understand separate Material Safety Data Sheet before using this product. Unsaturated polyester products release heat when they cure in bulk.

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#### Scott Bader SAS

65 rue Sully, 80044 Amiens Cedex 1 - France

Telephone: +33 (0)322 662 766 Fax: +33 (0)322 662 780

E-mail: [composites@scottbader.fr](mailto:composites@scottbader.fr)

[www.scottbader.com](http://www.scottbader.com)



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