

## GR100

A two-part, low viscosity isocyanate free filling and jointing compound

### Application

- Electrical potting
- Cable jointing
- Off shore and low temperature potting

### Key Properties

- Cures at 0°C
- Negligible exotherm
- Easy to mix and process
- Dig-outable
- Good tack and adhesion to plastics
- Convenient mix ratio
- Excellent water resistance

### Description

- Basic Two-component filled resin system
- Resin AR100
- Hardener BR100

Physical Data (approx. – values)	Resin	Hardener	Mixed
Colour	Yellow/Orange	Tan	Tan
Specific Gravity	0.90	1.43	1.24
Viscosity (mPas) @ 25°C	1600-2200	17000	4000-8000

Cure Schedule (250g)	Working Life	Gel time	Light Handling	Full Cure
Temperature	(minutes)	(minutes)	(hours)	(hours)
20°C	15-25	30-50	3	24
40°C	-	-	1	6
60°C	-	-	0.5	4

\*RT is defined as 20-25°C

The above are typical values and will vary depending on the cured mass and application. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exotherm. Experimentation and testing is suggested to avoid side effects. For maximum properties a post cure may be required – Contact our technical service department for advice.

### Processing

Mix ratio by weight 0.31:1  
Mix ratio by volume 0.5:1

### Approvals

RoHS compliant	Yes
UL94 V-0	No
REACH (SVHC concentration)	Refer to SDS

### Typical Properties – 24 hour cure @ RT

Hardness	8-10	Shore A
Operating Temperature	- 55 to +80	°C (application & geometry dependent)
Max. Elongation	~300	%
Tensile Strength	0.55	MPa
Water Absorption (7 days @ RT)	0.082	%
Permittivity	4.1	@100Hz
Surface Resistivity	6.9x10 <sup>14</sup>	Ω
Volume Resistivity	9.2x10 <sup>12</sup>	Ωcm

### Packaging

Available in Twinpacks and bulk

### Availability

Through [sales@robnor.co.uk](mailto:sales@robnor.co.uk) distribution and [www.resins-online.com](http://www.resins-online.com)

Twinpacks Part Numbers	
GR100/NC/100	GR100/NC/500
GR100/NC/250	

Twinpacks are pre-weighed resin and hardener components contained in a tough flexible film, separated by a removable clip and rail.

Once the clip and rail has been removed the resin and hardener is thoroughly mixed within the bag and is immediately ready for use. Mixing will normally take ~ 2 minutes due to the viscosity; but pay special attention to the corners.

Twinpacks are ideal for small to medium production runs, prototyping and on-site or field use.

The twinpack weight/volume may also be tailored to a specific size on request.

For further details please visit [www.robnor-resinlab.com](http://www.robnor-resinlab.com)

Bulk Materials Part Numbers	
AR100/NC/5KG	BR100/NC/5KG
AR100/NC/20KG	BR100/NC/25KG

Both resin and hardener are supplied in 5kg, 25kg and 200ltr drums and fully evacuated and ready for use.

Care should be taken to ensure when mixing the resins air is not entrained in the mixture.

If this is unavoidable the mixed resin and hardener should be re-evacuated before dispensing.

The bulk resin and hardener materials can be dispensed from suitable dispensing machinery, details provided by Fluid Research on request.

Kits and Sets Part Numbers	
Available on Request	

Kits and Sets are provided in separate containers to the correct ratio.

In Kit form, pour the contents of the small container into the larger container and use it as a mixing vessel.

Stir well using an appropriate mixer until homogeneous.

Note: Incomplete mixing will be characterised by erratic or partially incomplete cure even after extended time periods.

### Cleaning

All equipment contaminated with mixed material should be cleaned before the material has hardened.

TS130 is a suitable non-flammable cleaning agent, although other solvents may be found suitable.

TS130 will also remove cured material provided it is allowed to soak for a number of hours.

### Storage and Shelf Life

12 months at 25°C - Specialty packaging may be less.

Bulk containers should be inverted every two to three weeks to reduce the accumulation of the fillers on the bottom of the containers.

Isocyanates are sensitive to moisture and should be kept in their original container or in a volume tank under dry nitrogen blanketing.

Many isocyanates are prone to dimerization, the formation of a white precipitate. Products with minor amounts of this precipitate normally cure to full properties.

Storage at 20 +/- 5°C (60°F to 86°F) is recommended to ensure full shelf life.

### Health and Safety

Please refer to AR/BR100 Health and Safety data or our Technical Service Department for individual/specific advice.

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The results and information above do not constitute a specification and is given in good faith and without warranty. The information is derived from test/or extrapolations believed to be reliable and is quoted for guidance only. The product is offered for evaluation on the understanding the customer satisfies himself that the product is suitable for the intended application by proper evaluation and testing.

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