



# GRP Panels



delivering customer service, investing in capability



**Amari, the UK's leading independent aluminium and stainless steel stockholder, has a well-established reputation for supplying the RT sector.**



Amari is the fastest growing supplier of aluminium to the Road Transport Industry, providing a complete range of extrusions, treadplate, sheet, plate and shate through 18 branches nationwide as well as two service centres in Ireland. In addition to Carlier PANOLIT® GRP Panels, Amari stock a complete range of standard RT sections, plus a number of other special products for the RT sector, including ABS Cappings

and a selection of treadplate patterns. Amari has also recently launched the LoadsMORE® lightweight body system for 3.5 tonne GVW vehicles.



This unique new 'light curtain side' system means up to 40% more payload on 3.5 tonne chassis vehicles. LoadsMORE® is constructed from lightweight, corrosion-resistant anodised aluminium and is available with rear doors or rear curtains.

A drop-side system is also available offering smaller payload improvement.

[www.loadsmore.co.uk](http://www.loadsmore.co.uk)



Information on all products, including prices and stock availability throughout the UK can be obtained by contacting one of our branches as listed on the back of this brochure. Full details are also on the website at

[www.amari-ireland.com](http://www.amari-ireland.com)



## Amari – First Choice for RT Supplies

GRP Panels are just the latest addition to Amari's rapidly expanding range of products for the RT industry. As one of Europe's leading independent multi-metal distributors Amari has a thirty-year history of supplying a wide range of products to the RT sector. With a choice of 18 locations throughout the UK, an increasing number of customers are sourcing more of their requirements from their local Amari branch:

- Aluminium Rolled Products – sheet & patterned sheet, plate & treadplate, shate
- Standard Extrusions – angle, channel, tee, tube & box section, flat/square/round bar
- Extruded Aluminium Sections – Bearers/Runners, Floor Planks, Side Raves & Guards, Corner Pillars, Cant Rails, Top Hats, Zeds, Mouldings, Kick Strips
- Dropside Sections & Systems
- Slip-resistant flooring – Phenolic mesh faced Birch plywood
- Cappings – ABS & Aluminium/ABS
- Aluminium Decking Planks
- Type 4003 Stainless
- The NEW LoadsMORE® light-weight body system for 3.5 tonne GVW vehicles. See: [www.loadsmore.co.uk](http://www.loadsmore.co.uk)



LoadsMORE® is a registered Trade Mark of Aalco Metals Ltd



Road Transport Brochure



Amari Stock List



Complete Product Catalogue

Visit the Amari website to download our full range of literature.  
For hard copies, prices & stock availability and to place an order please contact your local branch as listed on the back cover.  
[www.amari-ireland.com](http://www.amari-ireland.com)

*The information contained herein is based on our present knowledge and experience and is given in good faith. However, no liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.*

*As the products detailed herein may be used for a wide variety of purposes and as the Company has no control over their use, the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or their fitness for any particular purpose. Any advice given by the Company to any third party is given for that party's assistance only and without any liability on the part of the Company. Any contract between the Company and a customer will be subject to the Company's Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request.*

### WEIGHTS

All weights shown in this publication are for guidance only. They are calculated using nominal dimensions and scientifically recognised densities. Please note that in practice, the actual weight can vary significantly from the theoretical weight due to variations in manufacturing tolerances and compositions.

August 2007

# Carrier GRP – User Guide

## Appearance of GRP Panels

As a result of raw materials used and the manufacturing process, the surface finish, of the interior and the exterior of the panel, may show some marks – This will not affect the mechanical properties of the panel.



## Painting

GRP Panels can be painted with polyurethane painting systems. It is important to carry out a thorough cleaning and degreasing of the surface before painting. Grinding of the gel-coat should be avoided at all costs. A soft rub down with household abrasive pad such as ‘Scotchbrite’ is sufficient. For a high quality final finish, please follow the procedures provided by the paint manufacturers.

*Important: In the production of glass reinforced polyester in any form, it is not always possible to guarantee a totally defect free surface.*

## Colour impregnated gel-coat

On request, panels can be manufactured with a colour impregnated gel-coat on the exterior face. We strongly recommend that these panels are ordered with a protective film coating. With such panels, great care must be taken when unloading and storing the panels. The panels must also be handled with care during production. It should be noted that the final colour and lustre of impregnated panels does not match that of a painted panel.

## Storage

The panels must be stored flat on wooden struts placed at least every 1500mm. They must be sheltered from bad weather and kept in a dry place. As the process of polymerization can continue for several weeks, we recommend very careful storage and handling. In case of extended storage periods of panels covered with a protective coating, we recommend removal of the coating to avoid any colour variation.

## Handling and Unloading

We recommend that the panels be unloaded using an overhead crane and that during the unloading the panels be fully supported – either by a purpose-built frame or by load straps positioned a minimum of every 2500mm along the full length of the panel.

Neither the manufacturer, Carrier Plastiques, nor Amari will accept any responsibility for the consequences of poor handling by any other method, which can lead to cracks, surface damage or broken panels. For handling small panels, such as those used for door blanks or bulkheads, it is possible to use a forklift, but in this case the lower and the upper side of the panel should be protected.

## Identifying Internal and External Faces

All panels are supplied with a sticker applied clearly showing the “INTERIOR SURFACE”. Please ensure that all panels are used in the correct orientation. In the case of panels higher than 2440mm, also ensure that the “TOP” sticker is correctly oriented in order to ensure that the horizontal joint of the panel is always at the top.

## Cutting

GRP panels can be cut using a circular saw with carbide-tipped blades. For cutting out an opening use a carbide-tipped jig saw. Always follow the guidelines from the cutting system manufacturer, especially for advice on the type of blade (number of teeth) required and the cutting speed.

## Cleaning

When the vehicle is delivered to the customer, it is important to advise the customers on the washing of GRP panels. The wrong pH of the detergent, together with an excessive pressure, or an excessive temperature at too short a distance to the panel may destroy its surface. The following general instructions should be adhered to:

- Maximum temperature: 70°C (158°F)
- Maximum pressure: 80 bar (1160 psi)
- Minimum distance between sprayer and panel: 30cm (12")
- Soft soaps or basic detergent: pH lower than 10
- Acid solutions: pH higher than 2

## Repairing

In case of accidental damage to a GRP panel, it is possible to effect a repair. This repair should be performed very quickly, as the ingress of moisture will alter the mechanical characteristics of the panel, and invalidate the guarantee.

Please do not hesitate to contact the panel manufacturer for further advice.

## Applications

General information can be found on the manufacturer's web site:

[www.carlier-plastiques.com](http://www.carlier-plastiques.com)

To determine side-wall thickness dimensions, please use following rules:

Thickness	Body Dimensions
6 to 11mm	Depending on the specific use
14mm	3.5 tonnes
17mm	13600 x 2440mm
20mm	13600 x 3150mm

No guarantee will be given outside of the above limits.

In the case of refrigerated vehicles, type and thickness of panels is governed by the use of the vehicle (refrigerated or chilled) and the type of refrigeration unit required for the operation.

## Internal Equipment

It is possible to fit equipment on the inside of the panels according to the customer's requirements, including:

- Metallic or GRP rub strip
- Horizontal load restraint rails
- Vertical rails for double deck
- Meat hanging device on the roof
- Fridge units and evaporator on the bulkhead or on the roof

The body builder must ensure that the panels specified are adequate for the purpose for which they are to be used. The fixation by screwing or riveting, with or without bonding, must be made in accordance with the specifications issued by the manufacturers.

In case of fixing equipment with screws on a panel with plywood core, carefully check the length of the screw – The end of the screw must stop before the 2nd ply from the outside. Fitting of load restraint rails must be undertaken carefully, to avoid waves on the side walls.

The manufacturers usage specifications of all equipment fitted must be followed.

## Return of Panels

In the case that any panel must be returned to the supplier, it must be handled stored and loaded in the correct manner. Damage caused by loading, storage and transportation whilst in the care of the customer will not be covered by the supplier.

The customer should note on the return paperwork, that the panel has been passed to the haulier in good condition (except for the reason of the return). It may be advisable for the supplier to ask the haulier for indemnity should any damage occur during the return transport.

## Repair procedure for small blemishes

*(scratches, small gelcoat cracks, small impacts)*

*Required products:*

- Thickened and pre-accelerated gelcoat
- Polyester film
- Catalyst (do not forget to protect your eyes, and wear gloves)
- Wax

*Procedure:*

1. Wax and shine the surface to be repaired (the wax helps to stop any surplus gelcoat sticking to the surface around the repair)
2. Rub down the area around the surface of the fault, ensuring that the edges are smooth and the whole area is dust free
3. Prepare the gelcoat: one button of gelcoat to 4 drops of catalyst and mix carefully
4. Apply the mixed gelcoat to the damaged area, and lay polyester film over the area, then level the film and gelcoat with a flat scraper.
5. After the gelcoat is hardened (times of hardening will vary according to temperature and atmospheric conditions), take the polyester film off, clean with a solvent and wipe off any excess gelcoat.

## Repair procedure for major blemishes

*(cracks into the core material and deep impacts..)*

1. Grind down an area of about 70mm in diameter around the area to be repaired, ensuring that the core of the panel is revealed
2. Grind down in a slope about 30mm around the first area
3. Dry the core if necessary
4. Apply a 300g/m<sup>2</sup> woven roving glass against the core, over the 70mm
5. Impregnate with white resin
6. Apply a 450g/m<sup>2</sup> chopped strand mat glass over the whole area of the repair (100mm)
7. Impregnate with white resin
8. Equalise and roll out the air bubbles
9. After the repair has hardened (times of hardening will vary according to temperature and atmospheric conditions) grind down in order to obtain a flat surface
10. Cover and fill the area with polyester mastic, then rub down with a fine sheet of wet and dry paper in order to obtain a good finish
11. Finish with white gelcoat using the same procedure as for small blemishes



**C.P.R.** Panels with Plywood core, GRP coating and gelcoat on both sides.

### Specifications From the outside to the inside

Gelcoat	White			Plywood: WBP	Polyester Resin			
Glasstissue	30g/m <sup>2</sup>				Types	CPR	CPRS	CPRSR
Types	CPR	CPRS	CPRSR		Glassfibre g/m <sup>2</sup>	300	450	840
Glassfibre g/m <sup>2</sup>	300	450	840		Glasstissue	30g/m <sup>2</sup>		
Polyester Resin					Gelcoat white	White		

### Thicknesses

STANDARD mm	6	8	10	11	14	17	20	24	27	30
WEIGHT kg/m <sup>2</sup> CPR	5.5	6.5	8.5	9	11	13	14.5	17	18.5	20.5
WEIGHT kg/m <sup>2</sup> CPRS	6.2	7.3	9.1	9.6	12	13.7	15.3	17.6	19.3	21.3
WEIGHT kg/m <sup>2</sup> CPRSR	6.8	7.8	9.8	10.3	12.3	14.3	15.8	18.3	19.8	21.8

### Dimensions

STANDARD WIDTH	2438mm	LENGTH	up to 13550mm
MAXIMUM WIDTH	3150mm	SPECIAL SIZES	on request

### Tolerances

LENGTH	+/- 5mm	THICKNESS	+/- 1mm
WIDTH	+/- 3mm	DIAGONAL DIFFERENCE	+/- 6mm

These panels fulfil the specifications of the NF Standard XP T 57-950-1

## Amari stock of PANOLIT® CPR Panels

Thickness mm	Length mm	Width mm	Weight kg
11	2440	2440	54
11	6096	2440	134
14	2438	2438	65
14	4877	2438	131
14	6096	2438	163
14	7315	2438	196
17	2438	2438	77
17	2743	2438	87
17	3048	2438	97
17	5486	2438	174
17	6096	2438	193
17	6705	2438	213
17	7315	2438	232
17	7925	2438	251
17	8534	2438	270
17	9144	2438	290



**NAPS Panels** *Honeycomb panels with GRP Coating and gelcoat on both sides.*

**Specifications From the outside to the inside**

Gelcoat	White			Honey-comb	Polyester Resin			
Glasstissue	30g/m <sup>2</sup>				Types	NAPS	NAP6	NAP7
Types	NAPS	NAP6	NAP7		Glassfibre g/m <sup>2</sup>	450	600	740
Glassfibre g/m <sup>2</sup>	450	600	740		Glasstissue	30g/m <sup>2</sup>		
Polyester Resin					Gelcoat	White		

**Thicknesses**

STANDARD mm		14	17	20	25	30
WEIGHT kg/m <sup>2</sup> NAPS		6.7	7.0	7.3	7.7	8.2
WEIGHT kg/m <sup>2</sup> NAP6		7.8	8.0	8.2	8.6	9.0
WEIGHT kg/m <sup>2</sup> NAP7		8.0	8.3	8.5	9.0	9.3
Coef. of insulation w/m <sup>2</sup> /k (NAPS)		5.03	4.37	3.66	2.87	2.37

**Dimensions**

STANDARD WIDTH	2438mm	LENGTH	up to 13550mm
MAXIMUM WIDTH	3150mm	SPECIAL SIZES	on request

**Tolerances**

LENGTH	+/- 5mm	THICKNESS	+/- 2mm
WIDTH	+/- 3mm	DIAGONAL DIFFERENCE	+/- 6mm

**These panels fulfil the specifications of the NF Standard XP T 57-950-1**

**Aesthetic Appearance:** Honeycomb weft may slightly show through on the surface.

**Amari stock of NAPS Panels**

Length (mm)	Width (mm)	Thickness (mm)	Weight per sheet (kg)
2438	2438	14	39.9
6096	2438	14	99.7

**GRP Liner Panels**

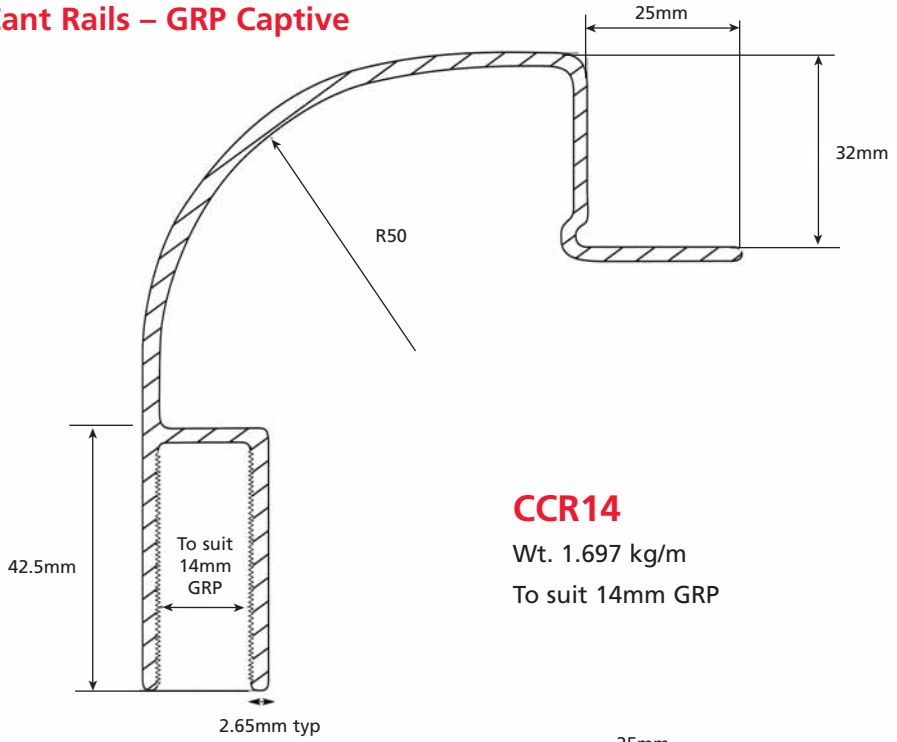
These light-weight gel-coated GRP Liner Panels are used in a range of applications including refrigerated vehicles, camper vans and leisure vehicles.

**Amari stock of GRP Liner Panels – 4mm thick**

Length (mm)	Width (mm)	Weight per sheet (kg)
2438	2438	34
6096	2438	85



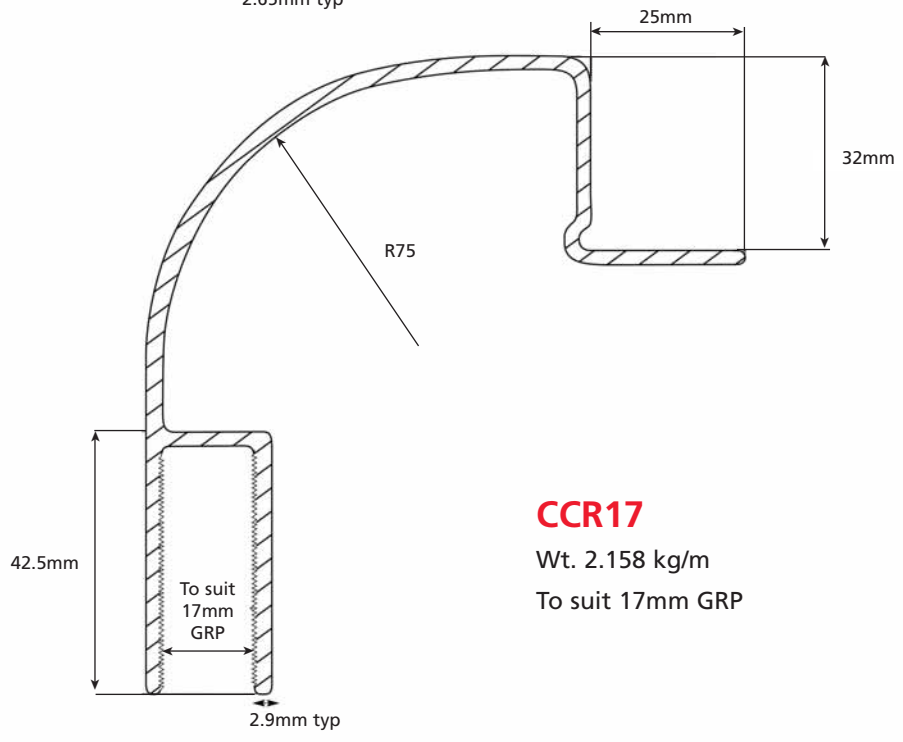
# Cant Rails – GRP Captive



## CCR14

Wt. 1.697 kg/m

To suit 14mm GRP

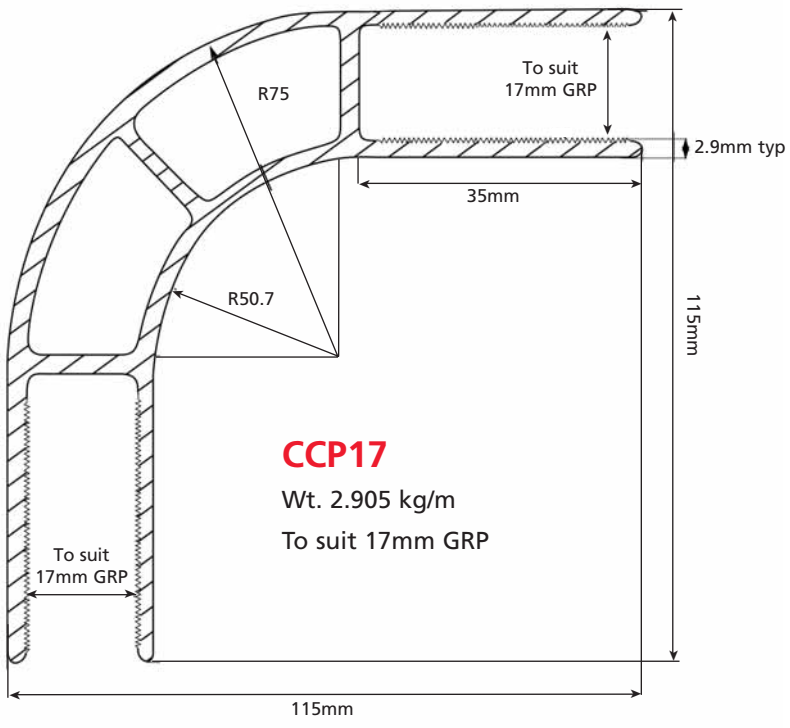
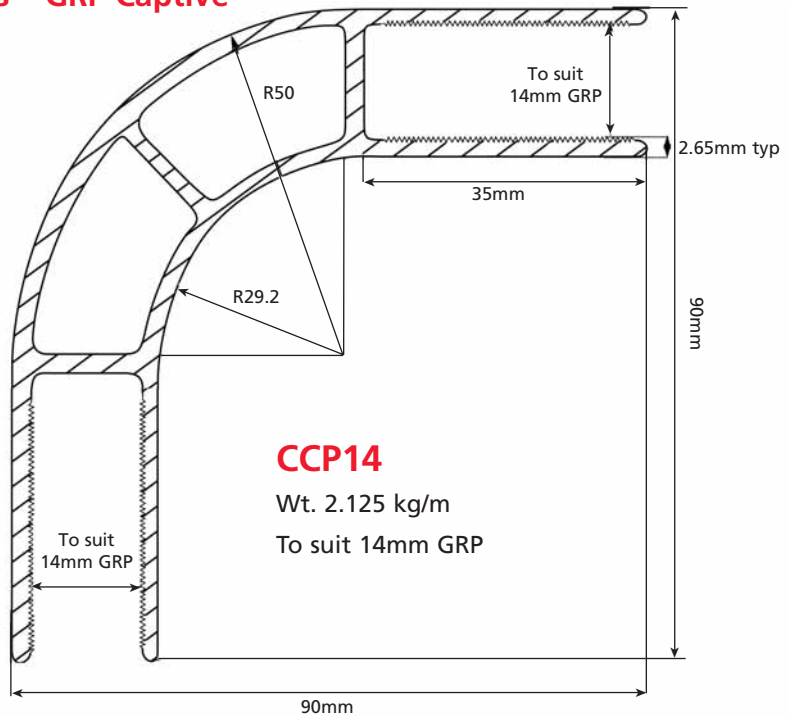


## CCR17

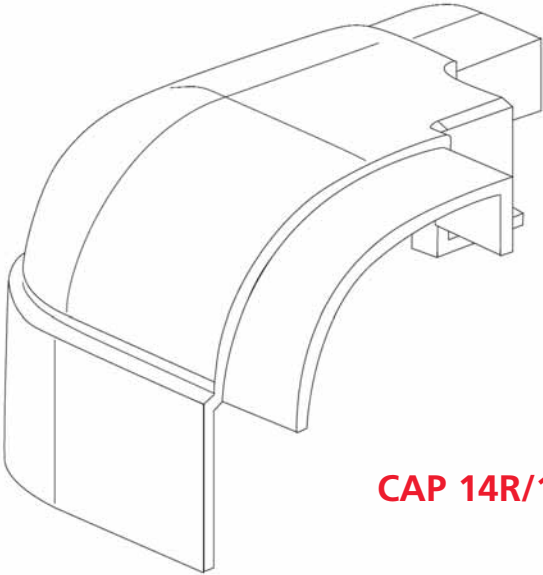
Wt. 2.158 kg/m

To suit 17mm GRP

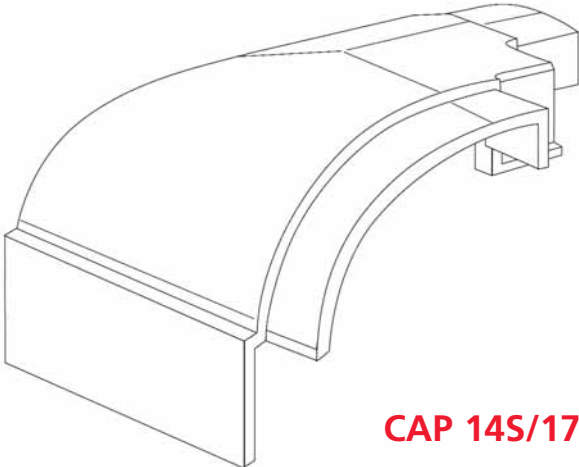
# Corner Pillars – GRP Captive



**Captive Castings – to suit both 14mm and 17mm GRP**



**CAP 14R/17R**



**CAP 14S/17S**



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