

# Amari

PLASTICS PLC

Greencast® Technical Information



The world's first fully recycled  
acrylic sheet - Greencast® from Amari Plastics

*Protecting your future*

Brought to you by

**Amari**  
PLASTICS PLC

## The first 100% recycled cast acrylic sheet range

Amari Plastics is once again leading the UK acrylic market with its innovative and unique, 100% recycled cast acrylic sheet range - Greencast®.

Manufactured in Italy, it is a premium quality product that is exclusively stocked in the UK and is available locally from your 14 Amari Plastics service centres.

### greencast

## 100% recycled premium quality cast acrylic sheets

Greencast® is a premium quality, branded cast acrylic manufactured in Italy by Madreperla s.p.a exclusively for Amari Plastics. Now in production and the market place for more than 2 years, Greencast® looks, performs, fabricates and lasts as long as standard virgin acrylics. It is available in a full range of clears, opals and colours as well as the speciality grades such as Satinglas, Seta LED and Metallic.

If you are looking for a real “green” alternative acrylic solution to offer to your retailer then Greencast® is the option:-

- Premium quality branded cast acrylic sheets backed by the Amari Plastics name
- Manufactured, tested and validated within the EU for more than 2 years
- Available in 3mm to 20mm thick sheets
- Available in sheet sizes 3050 x 2030 or 2030 x 1520mm
- Standard UK colour range available from your local Amari Plastics service centre
- Colour matching and specials available upon request
- Available as a standard gloss sheet or in most of the Madreperla speciality ranges such as Satinglas (frosted) sheets, Seta-LED® for LED light box illumination, Setapan® for kitchens and bathroom work surfaces, etc





## Ten year warranty Greencast®

Greencast® sheets produced by Madreperla, are under warranty for 10 years from the date of purchase, with regard to maintenance (within the time limits established herein), light transmission values and elastic bending modulus.

The warranty applies to transparent colourless and coloured transparent Greencast® sheets, according to the following:

<b>Greencast transparent colourless</b>	
Light transmission - elastic bending modulus	
light transmission measured according to standard ISO 13468 –1.	
minimum value on delivery:	90 %
minimum value up to 5 years:	88 %
minimum value after 6 ÷ 10 years:	85 %
Elastic bending modulus measured according to standard ISO 178	
minimum value on delivery:	3000 MPa
minimum value up to 5 years:	2800 MPa
minimum value after 6 ÷ 10 years:	2700 MPa

<b>Greencast transparent coloured</b>	
Elastic bending modulus measured according to standard ISO 178	
minimum value on delivery:	3000 MPa
minimum value up to 5 years:	2800 MPa
minimum value after 6 ÷ 10 years:	2700 MPa

The samples obtained for the tests must have clean, smooth surfaces and edges, with a thickness adequate for standard use, which should be between 2 and 4 mm.

The warranty is limited to substitution of the supplied material: any other costs (transformation, installation, control or others) are excluded.

After checking the grounds of any complaint, Madreperla s.p.a shall substitute all or part of the supplied material according to the procedures reported in the following table, starting from the purchase date:

within 3 years	100% value of the material
3 to 5 years	75 % value of the material
6 to 8 years	60 % value of the material
9 to 10 years	30 % value of the material

The warranty becomes operational from the date the sheets are delivered to the client.

### The warranty is not operational if

- the application envisages contact of the sheets with products which are aggressive for PMMA
- the sheets have been installed in polluting and corrosive environments
- the sheets have undergone post-machining procedures which are unsuitable for the material and not adequate for the application.

The client, in any case, must be aware of the information and instructions regarding the correct way to store the sheets and post-machining procedures.

The client may request the relevant documentation from our technical/commercial offices and from our representatives or authorised distributors.

# Amari

## PLASTICS PLC

Greencast® acrylic sheets are manufactured at Madreperla's plant in Cinisello Balsamo, close to Milan. The raw material used for their production is not synthetic methylmethacrylate (an organic solvent), but recycled methylmethacrylate obtained by the described process below, from waste and scraps, sourced in Europe as debris from manufacturers and fabricators, or as products at their life-end (advertising signs, P.O.P., etc.).

The process is proprietary technology and is the sole property of Madreperla. It starts from PMMA (polymethylmethacrylate better known as acrylic) scraps, and, through a chemical process called "cracking" and a further "distillation process", it regenerates liquid methylmethacrylate monomer, that is the raw material used for the production of Greencast® sheets.

### The process is eco-friendly:

- As it recovers scrapped material that would be disposed of either by landfill, combustion or shipment to emerging countries to be recycled,
- because the plant is auto-sustainable, using the waste products of the process itself to generate the energy necessary for operating the machinery,
- as the cooling water used in the process is then totally recovered and re-used for other operations in the factory that otherwise would need fresh water.
- Monomer is a very volatile liquid which requires storage at - 5° C degrees. The monomer produced at Madreperla's plant is manufactured and used immediately on site in Greencast® sheet production - meaning there is no storage and therefore it requires no energy as cooling is not required. Synthetic monomer requires substantial additional energy consumption for its transportation, that has to be done in refrigerated tankers, which is the norm for other manufacturers.

Greencast® is produced from scrap - which itself ensures that it is a sustainable product. Sustainability is the key to the future.

Thanks to Greencast®, Madreperla ensures that rather than disposing PMMA scraps through landfill or incineration, or sending them outside Europe (that involves again energy consumption in transportation), they are recycled locally into new cast acrylic sheets.

The process can be repeated over and over, and Greencast® sheets can be recycled in a continuous virtual cycle. Greencast® is as crystal clear as a standard sheet obtained from virgin synthetic monomer and is fully complying with ISO 7823.1 norm for cast sheets, thanks to the proprietary technology that Madreperla uses in the cracking and distillation processes of the scrapped material.

### Summarizing: Greencast® is far more environmentally friendly than a standard acrylic sheet because:

- it uses 100% raw material recovered from scraps
- it uses less energy as the process burns its own waste products for the production of the necessary heat
- it requires no energy for storage (immediate local use instead of refrigerated transport)
- it needs no fuel consumption for transportation of virgin MMA (recycled monomer is used locally)

Madreperla spa - production of Recycled Methylmethacrylate for Greencast acrylic sheets	
Water Consumption	0,0 m3/ton of produced MMA (water is totally re-used)
Carbon Impact ( Kg CO2 /5mm sheet 2030 x 3050mm)	60 % value of the material
PMMA scrap to be disposed, after sheets production	0%. Madreperla can collect and reprocess all scrap and debris coming out from its sheets production, as well as from the production of PMMA products done by its customers.
Maintenance / Cleaning Implications	easy to clean using standard industry cleaning materials as used on virgin acrylics.
Recycled Content	>=100%
Recyclability (is there a known route)	PMMA is a material completely inert, 100% recyclable at the end of its life cycle
Hazardous Chemicals / VOC's in manufacture, maintenance & cleaning	VOC free
Whole Life Cycle Implications	Material completely inert, recyclable at the end of its life
Country of Manufacture	Italy



## Greencast® - Typical property values

### **Technical conditions**

Our sheets are delivered in accordance to ISO 7823-1.

### **Untrimmed sheets**

Our cast sheets can be supplied on request untrimmed. Minor defects may occur in the oversize. Only net dimensions will be charged to the customer. The untrimmed size of the sheets is roughly 40 mm bigger than the trimmed one.

### **Tolerances on size**

The tolerances are as follows:

- Standard sizes: 0 to + 10mm.
- Cut-to-size:  $\pm$  1mm/ml.

### **Out of standard items**

The present delivery programme summarizes the standard items. Other thicknesses or dimensions can be produced on request with minimum quantities. The order is accepted for the smallest production batch. Sub-standard sheets are supplied cut-to-size upon costumers request.

### **Cut-to-size sheets**

On request we can supply cut-to-size sheets minimum material required 400 cm<sup>2</sup>.

### **Colour formulation**

Slight differences may occur in shade between different production batches of the same colour caused by different pigments batches, although every care has been put in production to ensure continuity.

### **Squared cutting**

On request we can supply squared cuttings.

### **Colour matches**

On request we can supply colour matches with a minimum order quantity which varies depending on the thickness. For further information please contact your local Amari Plastics centre.

We have a large number of colour formulations already, therefore don't hesitate to contact us for information.

### **Standard protection**

The printed PE film indicates the side to be used. Our film is thermo formable on sheets with glossy surface, but the customer should perform a trial before use. The film protecting matt and frost surfaces cannot be thermoformed. All PE protection films are suitable for laser cutting.

## Greencast<sup>®</sup> - Typical property values

General Properties	Test Standard	Unit	Value
Density	ISO 1183	g/cm <sup>3</sup>	1,19
Water absorption 24 hrs	ISO R 62 / DIN 53495	%	0,3
Water absorption 8 days	ISO R 62 / DIN 53495	%	0,5
Max.water absorption 1200 hrs	internal	%	1,75
Mechanical Properties	Test Standard	Unit	Value
Poisson's ratio	ISO 527-1		0,39
Tensile strength at 23°C	ISO 527-2/1 B/5	MPa	76
Modulus of elasticity at 23°C	ISO 527-2/1 B/1	MPa	3300
Elongation at break at 23°C	ISO 527-2/1 B/5	%	5
Flexural strength	ISO 178	MPa	110
Notched impact strength (Izod)	ISO 180/1 A	KJ/m <sup>2</sup>	1,4
Impact strength (Charpy)	ISO 179/1	KJ/m <sup>2</sup>	13
Rockwell hardness M scale	ISO 2039-2		95
Compressive yield stress	ISO 604	MPa	110
Abrasion resistance	ISO 14782	%	0,5 to 1
Electrical Properties	Test Standard	Unit	Value
Dielectric strength	DIN 53481	KW/mm	20 to 25
Volume resistivity	DIN 53482	ohm x cm	> 10 15
Dielectric constant at 50 Hz	DIN 53483		3,7
Dielectric constant at 1 Hz	DIN 53483		2,6
Optical Properties	Test Standard	Unit	Value
Transmittance	ISO 4892-1 / DIN 5036	%	92
Refractive index	ISO 4892 / DIN 53491		1,49
Thermal Properties	Test Standard	Unit	Value
Coefficient of linear thermal expansion	ISO EN 2155-1	mm/m/°C	0,065
Thermal conductivity	DIN 52612	W/m/°C	0,17
Specific heat	ASTM C 351	J/g/°C	1,35
Vicat softening temperature	ISO R 306 Method A50	°C	> 108
Heat deflection temperature under load HDT	ISO 75/A	°C	102
Dimensional change on heating (shrinkage)		°C	2,5
Permanent service temperature		°C	80
Oven temperature		°C	130-180
Max heating temperature		°C	200
Max surface temperature (IR radiator)		°C	200
Flammability Test	Test Standard	Unit	Value
Ignition temperature	DIN 51794	°C	425 approx
Fire rating	DIN 4102		B2 normal flammability
	NF P 9250		M4
	BS 476 Part. 7		class 3

The trials have been done on random samples and the values are not strictly binding. Release 2010



## Greencast® - Technical report

**Table of the average values**

Properties		Measured value	Requisite (UNI EN ISO 7823-1: 2005)
Tensile properties	Tensile modulus	3220 MPa	≥ 3000 MPa
	Stress at break	73,1 ± 0,9 MPa	≥ 70 MPa
	Strain at break	≥ 6,8 %	≥ 4 %
Charpy impact strength		18,3 kJ/m <sup>2</sup>	≥ 13 kJ/m <sup>2</sup>
Vicat softening temperature		109°C	≥ 105°C
Dimensional change of heating (shrinkage)		1,9 %	≤ 2,5 %
Total luminous trasmittance*		92,7 %	≥ 90 %
Light trasmittance at 420 nm*	As received	92 %	≥ 90 %
	After exposure to xenon lamp	91 %	≥ 88 %

\*The measurement was carried out by an external Laboratory.

### 1 "Tensile properties"

Reference standard	ISO 527-2: 1996
Test specimen preparation	By machining. The specimen thickness is equal to the thickness of the sheet delivered by the Customer.
Conditioning	48 hours at test temperature
Test temperature	Test temperature 23 ± 2°C
Number of test specimens	8
Test specimen type	Type 1B
Testing speed	1mm/min for determining the modulus; 5mm/min for determining the ultimate tensile properties.
Clamps distance	110mm
Gauge Length at 420 nm*	25,0mm
Testing machine classification	Class 0,5

\*The measurement was carried out by an external Laboratory.

### Results of the single tests

Specimen	Width [mm]	Thickness [mm]	Modulus of elasticity in tension [MPa]	Tensile strength [MPa]	Tensile strain [%]
1	2,77	9,80	3260	70,3*	3,9*
2	2,79	10,07	3270	71,1*	4,0*
3	2,80	9,73	3170	72,9	9,6
4	2,78	10,10	3310	72,9	7,1
5	2,80	9,74	3180	72,9	≥ 10
6	2,77	9,78	3120	72,5	≥ 10
7	2,76	10,03	n.c	73,5	6,8
8	2,80	10,10	n.c	73,9	6,8
		<b>Average value</b>	<b>3220</b>	<b>73,1</b>	<b>≥ 6,8</b>
		<b>Standard dev</b>	<b>70</b>	<b>0,5</b>	<b>//</b>
		<b>Expanded uncertainty</b>	<b>//</b>	<b>0,9</b>	<b>//</b>

\* Value not considered in the evaluation of the average value because the break occurred in correspondence of a specimen defect.

n.c: Measurement not carried out.

## Greencast® - Technical report

### 2 “Charpy impact properties”

Standard reference	ISO 179-1:2010
Test specimen preparation	By machining. The specimen thickness is equal to the thickness of the sheet delivered by the Customer.
Number of test specimens	10
Test specimen	1fU (Unnotched specimen – Flatwise normal testing)
Conditioning	48 h at 23 ± 2°C
Test specimen type	Type 1B
Impact energy	15,0 J
Impact velocity	3,46 m/s
Distance between supports	62,0mm

### Results of the single tests

Specimen	Width [mm]	Thickness [mm]	Modulus of elasticity in tension [MPa]	Tensile strength [MPa]
1	10,03	2,82	17,0	C
2	9,83	2,83	18,9	C
3	10,00	2,83	18,1	C
4	10,07	2,82	17,4	C
5	9,90	2,82	18,0	C
6	9,97	2,83	19,8	C
7	9,94	2,83	19,7	C
8	10,04	2,82	18,6	C
9	9,96	2,82	17,5	C
10	9,90	2,82	18,3	C
		<b>Average value</b>	<b>18,3</b>	C = Complete break
		<b>Standard dev</b>	<b>0,9</b>	
		<b>Designation</b>	<b>18,3C</b>	

### 3 “Vicat softening temperature(VST)”

Standard reference	ISO 306: 2004 (Method B50)
Test specimen preparation	By machining. The specimen thickness is equal to the thickness of the sheet delivered by the Customer.
Number of test specimens	2
Test specimen	1fU (Unnotched specimen – Flatwise normal testing)
Conditioning	16 h at 80 ± 1°C and subsequent cooling in a drier
Temperature increase rate	50 ± 5°C/h (average temperature increase rate = 49,0°C/h)
Temperature at test start	≈ 23°C
Heat-transfer medium	Silicone oil
Applied load	62,0mm50,0 N

### Results of the single tests

Specimen	Thickness [mm]	VS [°C]
1	2,82	108,7
2	2,83	108,8
<b>Average value</b>		<b>109</b>

#### 4 “Dimensional change on heating (shrinkage)”

Standard reference	UNI EN ISO 7823-1: 2005 (Annex A)
Test specimen preparation	By machining. The specimen thickness is equal to the thickness of the sheet delivered by the Customer.
Number of test specimens	3
Conditioning	48 h at $70 \pm 1^\circ\text{C}$ and subsequent cooling in a dessicator
Heating procedure	60 min. at $160^\circ\text{C}$
Cooling procedure	24 h at $23 \pm 2^\circ\text{C}$ in a dessicator
Expanded uncertainty of the linear measurement of the test instrument	0,031 mm

#### Results of the single tests

Specimen	Side	Dimension after heating [mm]	Dimensional change [%]
1	A	100,45	1,9
	B	100,35	1,8
2	A	100,30	1,9
	B	100,45	1,9
3	A	100,25	1,9
	B	100,25	1,8
		<b>Average value</b>	<b>1,9</b>

#### 5 “Exposure to xenon lamp”

Standard reference	ISO 4892-2: 2006 (AMID 2009)
Light source	Xenon arc lamp
Irradiance	The irradiance of $57 \text{ W/m}^2$ is measured in the wavelength range from 295nm to 400nm.
Reference condition	Irradiance: $550 \text{ W/m}^2$ . Wavelength range: 300nm ÷ 800nm.
Lamp voltage	Air cooled lamp with 2500W intensity measured on the sample surface.
Filter	UV filter (280 nm) installed between lamp and test chamber.
Thermometer	B.S.T. (black-standard thermometer). Temperature: $65 \pm 3^\circ\text{C}$
Relative humidity	Not controlled
Total irradiance	$\cong 2.8 \text{ GJ/m}^2$ .
Total exposure	$1390 \pm 1 \text{ h}$
Exposure period	0,031 mm Continued irradiance with water immersion: - 102 minutes dry; - 18 minutes water immersion

#### 5.1 “Total luminous trasmittance”

Standard reference	ISO 13468-1: 1996
Test specimen preparation	By machining. The specimen thickness is equal to the thickness of the sheet delivered by the Customer.

\*The measurement was carried out by an external Laboratory

#### Test results

Sample	Trasmittance [%]
As received	92,7
After exposure	92.4

## 5.2 “Light trasmittance at 420 nm”

Standard reference	ISO 13468-2: 1999
Test specimen preparation	By machining. The specimen thickness is equal to the thickness of the sheet delivered by the Customer.

### Test results

Sample	Trasmittance [%]
As received	92
After exposure	91

\*The measurement was carried out by an external Laboratory

### “Exposure of uncertainty in measurement”

The standard uncertainty. Associated with the test results, is estimated according to UNI CEI ENV 13005: 2000 by using the following error propagation law

$$u^2 c(R) = u^2 \text{mis} + u^2 \text{mod}$$

Where  $u_{\text{mis}}$  is the standard uncertainty associated to the repeatability of the experimental method (estimated as the experimental standard deviation) and  $u_{\text{mod}}$  is the standard deviation uncertainty obtained by the composition of the uncertainties of the input measurements.

The expanded uncertainty  $U(R)$  is estimated by the product of the standard uncertainty  $u_c(R)$  and the coverage factor for a coverage probability of 95% for a Student distribution with a number of degrees of freedom determined by the Welch-Satterthwaite model.



## Amari stock range

### Clear 1000

Code	Thickness mm	Size mm	Size mm	Standard
71000	3 4 5	1525 x 2030	2030 x 3050	•
71000	6 8 10 12 15 20	1510 x 2020	2020 x 3020	•

### White and Opal

Code	Description	2030 x 3050 thickness mm	Standard
74013	Dense White	3 5	•
72000	Opal equivalent to Acrycast A002 26% LT at 3mm	3 5	•
72002	Opal equivalent to Acrycast A004 51% LT at 3mm	3 5	•
72008	Opal equivalent to Acrycast A005 37% LT at 3mm	3 5	•
72009	Opal equivalent to Acrycast A003 70% LT at 3mm	3 5	•

### Colours

Code	Description	2030 x 3050 thickness mm	Standard
72026	Ivory	3 5	•
72013	Sun Yellow	3 5	•
72314	Yellow	3 5	•
72337	Red	3 5	•
72033	Bright Red	3 5	•
72038	Cherry Red	3 5	•
72316	Orange	3 5	•
72354	Green	3 5	•
72462	Blue	3 5	•
72463	Blue	3 5	•
72464	Blue	3 5	•
72360	Night Blue	3 5	•
74074	Grey	3 5	•
71075	Neutral Grey	3 5	•
71084	Neutral Medium Grey	3 5	•
71087	Neutral Dark Grey	3 5	•
74881	Black	3 5	•

**VIEWSIDE** for colours and opals, green protection is identifying the side to be used.

**COLOUR INTENSITY** The colour intensity remains constant up to 10 mm thickness.

**ISO 7823 - 1** Thickness Tolerances **COLOUR INTENSITY** The colour intensity remains constant up to 10 mm thickness.

**ISO 7823 - 1** following thickness tolerances are accepted: +/- (0,4+0,1 s) where s is the nominal thickness in mm.

Dense Colours			
Code	Description	2030 x 3050 thickness mm	Upon request
74007	Ivory	3	
74027	Brown	3	

White and Opal					
Code	Description	2030 x 3050 thickness mm		2020 x 3020 thickness mm	Upon request
71021	Light Brown	3	4 5	6 8 10 15	
71025	Medium Brown	3	5		
71029	Brown	3		6 8	
71040	Dark Brown	3	5	6 8	
71046	Violet Grey	3		8	

Thick Tinted Colours					
Code	Description	2020 x 3020 thickness mm			Upon request
71060	Green Clear	8			
71363	Light Blue	8			
71278	Light Grey	8	10	12 15	
71257	Light Green	8	10	12 15	
71270	Light Grey	8		15	

Glass - Look					
Code	Description	2030 x 3050 thickness mm		2020 x 3020 thickness mm	Upon request
71005	Glasslook	3	4 5	6 8 10 15	
75005	Glasslook Matt	3	4 5	6 8 10 15	

Colours			
Code	Description	2030 x 3050 thickness mm	Upon request
72218	Champagne	3	
72011	Gold Yellow	3	
72210	Yellow	3	
72211	Sunflower Yellow	3	
72016	Orange Yellow	3	
72012	Orange	3	
72034	Dark Red	3	
72036	Brilliant Red	3	
72232	Brilliant Red	3	
72231	Cardinal Red	3	
72237	Bordeaux	3	
72049	Fuchsia	3	
72239	Violet	3	
72054	Medium Green	3	
72056	Mint Green	3	
72057	Apple Green	3	
72058	Brilliant Green	3	
72059	English Green	3	
72251	Light Green	3	
72065	Blue Torquoise	3	
72063	Bright Blue	3	
72067	Sea Blue	3	
72060	Medium Blue	3	
72061	Navy Blue	3	
72261	Gentian Blue	3	

**Minimum order quantity for special makings** 3, 4, 5, 6 mm thickness – 30 sheets  
8, 10, 15, 20 mm thickness – 15 sheets

**VIEWSIDE** for colours and opals, green protection is identifying the side to be used.

**COLOUR INTENSITY** The colour intensity remains constant up to 10 mm thickness.



Greencast® is not synthetic methylmethacrylate - an organic solvent - it is recycled methylmethacrylate obtained by the cracking process from recycled and scrap acrylic products sourced in Europe.

## Greencast® is made from 100% recycled acrylic - R-MMA.

Greencast® sheets can be then recycled again to make new products.

Amari Plastics offers a fully closed loop through our own recycling company, Recycled Plastics, who can process your scrap and return it to Madreperla for manufacturing into new sheets.

Greencast® can use signs, displays, printed media and glued materials that you remove from your end user - solving their problem of waste disposal.

Greencast® has been independently verified and tested by German and Italian universities - certification available upon request.

Greencast® uses less water and CO2 to manufacture than virgin sheet production - data available upon request.

Greencast® is VOC and HFC free.

Greencast® complies with ISO 7823.1

Greencast® has the same mechanical and physical properties as standard virgin acrylic.

## Can you afford not to use Greencast®?

**greencast**

The responsible choice for the environment.



## Greencast®

Greencast® is not only available in the standard acrylic ranges but also in the majority of speciality products made by Madreperla such as:-

**Satinglas®** is Amari Plastics leading stock range of 2 sided matt or Frosted acrylic sheets. Working in exactly the same way as standard acrylic sheets Satinglas is ideal for POS /POP, signage, displays, furniture and high class interior shop fitting as it is non - reflective and the frosted surface ensures a harder wearing, sustained quality appearance and feel to the acrylic. The product gives the appearance of having been sandblasted or etched and can be used to enhance privacy.

**Setasand®** - a frosted acrylic sheet that has frost surfaces on both sides but is manufactured with a much heavier frosting than any other acrylic. This gives the product the ability to be thermoformed without losing its matt surface and ensures that in areas of high foot traffic it remains in perfect condition with no scratching or fingerprints being visible. Note Setasand® also does not gather dust like standard acrylic sheets due to a reduced static charge in the sheet. Setasand® is ideal for furniture, POS/POP displays. Shopfitting, interiors such as vertical paneling or hanging doors, screens and lampshades

**Metallic®** - a huge range of metallic colours in acrylic that are thermoformable. Manufactured in 4 different grades - standard metallic's, matt 1 side, IRO - a guaranteed metallic for external use and the Iridis or Pearlescent range. Traditionally the metallic range would be used in gold or silver for lettering or applications where the original material chosen is hard to get hold of or harder to work with – such as lettering for public houses or displays and exhibitions. The Metallic range is however available in colours such as Black, Copper, Titanium etc and offers the designer the ability to provide eye catching displays with a degree of originality

**Seta-LED®** - the new acrylic specifically designed for illumination of signs and displays in conjunction with LED lighting. The sign and display market has, for environmental reasons, moved towards high - efficiency light sources such as LED's. Seta-LED® has been formulated to meet the typical wavelength of LED colours and maintain the same tone with or without illumination. Seta led has excellent light spreading properties and therefore eliminates the common problem of hot spots or pin holes where the LED can be seen

**Setaparfum®** - a cast acrylic sheet manufactured for Amari Plastics specifically for use in displays or POS / POP applications in perfumeries, beauty salons and cosmetic counters. Setaparfum® offers an increased level of resistance to the acrylic being attacked by the chemicals within the perfumes that often results in crazing and deformation of the POS / POP displays. Setaparfum® is 6 times more resistant than standard cast acrylic and 40 times more resistant to chemical attack than Extruded acrylic.



## Greencast® and the Amari Recycling Initiative (ARI)

Why recycling with Greencast® benefits you.



Greencast® acrylic is made from any scrap acrylic material, be it cast or extruded, printed, glued or plain material. If you register to supply Amari with scrap and waste material it will be returned to Madreperla and changed into fresh sheets of Greencast® acrylic. This process can be repeated over and over and therefore, with the benefits previously outlined in this brochure, reduces the impact of your companies activities on the global environment.

On top of this, your scrap material can earn you a realistic scrap market rate and you help minimise landfill and improve our planets long term health.

### Why would you not want to be part of this Amari initiative?

We will certify what your business is doing and offer accreditation that may help you win business from the more environmentally conscious end users.

For further information please contact your local Amari Plastics centre or find us on [www.amariplastics.com](http://www.amariplastics.com)

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