

ALTUGLAS®
BY ARKEMA

SANITARY /

Acrylic sheets offer



ALTUGLAS® CS
ALTUGLAS® CS EASY FORMING

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ALTUGLAS® SANITARY ACRYLIC SHEETS OFFER

The Altuglas® Sanitary grade is made of 100% cross-linked cast acrylic sheet, with a superior surface finish and high molecular weight. This material has been specially designed for the manufacturing of high quality bathtubs, shower trays and other sanitary appliances, and is widely used for more than 50 years.

Unique advantages of cast acrylic sheets

- Very smooth surface finish thanks to cast process
- Exceptional thermal, chemical and mechanical resistance
- Durability with 10 year guarantee
- Reliable quality
- Fully recyclable due to its 100% acrylic composition
- Easy to thermoform
- A wide range of colours

Two ranges of sheets

- **Altuglas® CS range** for standard sanitaryware applications.
- **Altuglas® CS Easy Forming range** with a higher thermoformability for deep or complex models.

Two different finishes

Glossy, for a high quality gloss aspect and **Satin**, for an upper matt aspect.

This catalogue is reflecting the current trends in the sanitary field. In most cases, the colour was developed using master sample tiles provided by the leading ceramic manufacturer. In all other cases, commercial samples were used.

ALTUGLAS® CS RANGE

To be noticed

- Other thicknesses than the ones indicated are classified as products on request. Please contact your Altuglas® sales team.
- **The availability time is approximately 3 weeks.**
- The standard protection for all grades is a clear thermoformable film on the top face of the sheet, the other face is not protected.

FOR YOUR **STANDARD SANITARYWARE** APPLICATIONS

Colour	Name	Reference	Thickness in mm				Face effect
			3,2	4	5	8	
WHITE	White White	110 20081	◆ ○	◆ ○	◆ ○		Glossy
	European White	110 20684	◆ ○	◆ ○	◆ ○	◆	Glossy
CREAM	Pergamon	110 23195	◆ ○	◆ ○			Glossy



Sizes in untrimmed sheets in stock ◆ : 3085 mm x 1820 mm ○ : 3060 mm x 2060 mm

✦ OTHER SIZES

All references in this range can be delivered cut to size with a minimum order line of 30 sqm or equivalent approximately to 5 standards sheets. Due to the cutting optimization, except by special agreement, a variation between 0 and + 5% should be accepted between the number of sheets ordered and the number of sheets delivered.



ALTUGLAS®

CS.EASY FORMING RANGE

To be noticed

- Other thicknesses than the ones indicated are classified as products on request. Please contact your Altuglas® sales team.
- **The delivery availability time is approximately 3 weeks.**
- Protection:
  - For all glossy references: a clear thermoformable film on the top face of the sheet, the other face is not protected (except for the clear reference which is masked both side with a thermoformable film).
  - For the satin reference: a non-thermoformable film on the top face. This film must be removed before thermoforming (before heating).

FOR YOUR **DEEP OR COMPLEX MODELS** ON STOCK

Colour	Name	Reference	Thickness in mm			Face effect
			3,2	4	5	
WHITE	White White	112 20081		◆		Glossy
	Bianco	112 20493	○	◆ ○	◆ ○	Glossy
	European White	112 20684	◆ ○	◆ ○	◆	Glossy
	Edelweiss	113 20688	○	○		Mono satin
	Star White	112 23686		○		Glossy
CLEAR	Clear	112 10001		○		Glossy



Sizes in untrimmed sheets in stock ◆ : 3085 mm x 1820 mm ○ : 3060 mm x 2060 mm

✦ OTHER SIZES

All references in this range can be delivered cut to size with a minimum order line of 30 sqm or equivalent approximately to 5 standards sheets. Due to the cutting optimisation, except by special agreement, a variation between 0 and + 5 % can be allowed between the number of sheets ordered and the one delivered.

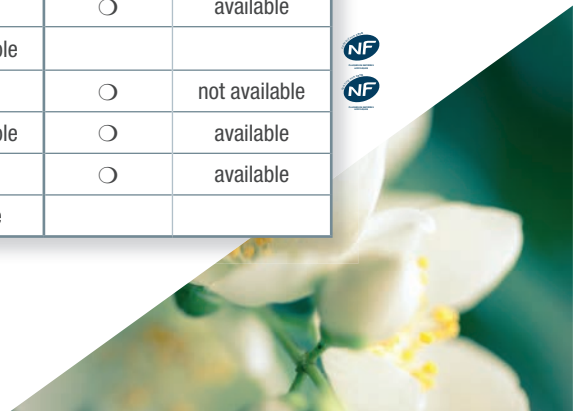
OTHER COLOURS ON REQUEST

❖ NATURAL SATIN FACE, A WIDE RANGE OF COLOURS FOR A TRENDY EFFECT

Colour / Name	Reference	Thickness in 3,2 mm	Cut to size	Thickness in 4 mm	Cut to size
Jasmin	113 20189			○	not available
Roca Edelweiss	113 22687	○	available		
Creme	113 25107			○	available
Greigo	113 25109	○	available		
Brown	11330224			○	available
Black	113 30530	○	not available		
Ebony	113 30636			○	not available
Anthracite	113 30655	○	not available	○	available
Grey	113 30656			○	available
Nero	113 30659	○	available		



○ : 3060 mm x 2060 mm



 GLOSSY FACE

Colour / Name	Reference	Thickness in mm			Cut to size all thicknesses
		3,2	4	5	
Indian Ivory	112 20192	○			not available
Champagne	112 20199	○	○		
Mossgreen	112 20385		○		
Manhattan	112 20683	○	○		
Whisper pink	112 20883		○		
Bahamas	112 21186	○	○		
Bleu Azur	112 21482		○		
Natura	112 24184			○	
Black	112 30530		○		
Ebony	112 30636		○		



○ : 3060 mm x 2060 mm

 AVAILABILITY

A production batch is 160 to 180 sqm or 27 to 30 sheets. The quantity that will be delivered can vary between 160 and 180 sqm. The availability time is between 4 and 6 weeks. Please note that the whole production batch will be invoiced.

INFORMATION

Tolerances of dimensions

Altuglas® cast sheets are supplied in compliance with the international standard ISO 7823/1-2003 concerning cast PMMA sheet.

The dimensional tolerances are (in length or width):

- up to 1000 mm: 0/+ 3 mm
- from 1001 to 2000 mm: 0/+ 6 mm
- from 2001 to 3000 mm: 0/+ 9 mm
- from 3001 and over: 0/+ 0,3%

Reference face or view face

The side of the Altuglas® Sanitary sheets which will be visible in use, must be the top face (clear polyethylene film). The bottom may have slight variations in gloss and tint.





Film guarantee

The thermoforming properties of the film are guaranteed for one year from the manufacturing date which is printed on the sheet. This guarantee is valid if the sheets have been stored according to the recommendations (p.14). An excessive thermoforming temperature may deteriorate the sheet protective film making it more difficult to remove.

Repair sets

Small accidental scratches can be removed by polishing with Special Care Polish N°1. If the damage is extensive, Altuglas International supplies sets in the desired colour. These are used to reconstitute the material on the damaged spot.

Repair sets can be ordered for all colours of the Altuglas® grades.

Please contact Altuglas International sales office for minimum ordered quantity and availability. These sets contain:

- 25 g can of coloured resin.
- 1,5 cc bottle of catalyst for the resin.

They must be mixed and used according to the instructions available in the box.

Please note that the delivery is exclusively combined with the delivery of Altuglas® sheets.

RECOMMENDATIONS

Storage

The pallets must be stored in a dry place away from direct sunlight and rain. Nevertheless, the pallets can remain outside for a maximum duration of 24 hours after unloading. It is recommended to store sheets horizontally on their original pallets. It is strongly recommended not to stack pallets so as not to create internal stresses and alter the flatness of sheets. When only a few sheets have been used, make sure that the rest are repacked.

Handling

Do not handle the Altuglas® sheets with bare hands, it could pollute the surface. The edges are sharp, please wear clean leather gloves.

Do not wear fluffy, brightly-coloured clothes, the sheets could be polluted by cloth fibres or the cloth colouring could pass through the film, causing stains or marks. Wear white or grey cotton overalls.

Do not move the sheets causing them to slide, this could damage the polyethylene protective film and lead to the manufacturing of marked thermoformed products. Two people should carry them or a suction-paddled remover should be used.





Processing

Altuglas® sheets must be thermoformed by conventional methods using a female mould under vacuum. Nevertheless versatile production procedures can be employed. After moulding, a shell is obtained, but generally this shell is too flexible and must be reinforced to give the required rigidity to the product. After reinforcement, the piece is trimmed and drilled for waste, overflow, taps and other fittings which may be required.

Technical advice

The best performances during thermoforming are obtained at a temperature around 180°C. The sheets can be heated about 15°C more, in order to compensate for the loss of temperature during handling. The sheet must be heated uniformly throughout the thickness and over the entire surface. It is advisable to work with aluminium moulds, with incorporated water channels to enable a temperature regulation. This is a key to consistent moulding conditions. The cooling conditions must be determined in order to cool down the entire surface, but mainly in the area of the clamping system. The shell must be removed from the mould at a temperature above 70°C but below 80°C. This avoids breakage on the mould or distortions after demoulding.

ABOUT NF CERTIFICATION

What is the NF mark?

The NF mark affixed to a product guarantees that it complies with the relevant standards and, where applicable, additional technical specifications requested by the market. The characteristics set out by CSTB (Centre Scientifique et Technique du bâtiment) are specified in the specifications referred to as the certification reference system, drawn up in consultation with parties concerned. The certification rules concerning acrylic sheets bear the number 116. They can be downloaded from the website **evaluation.cstb.fr**.

CSTB tests the products and audits the companies within the scope of this certification.

On what products can the NF mark be found?

The NF mark concerns cast acrylic sheets mainly used to manufacture baths and shower trays.

CSTB 84, avenue Jean Jaurès - Champs-sur-Marne
77447 MARNE-LA-VALLE Cedex 2 - France





What does the NF mark provide?

The NF mark -ACRYLIC SHEETS- certifies the compliance of acrylic sheets with the European standard EN 263 and additional documentation in the NF116 certification reference system approved by AFNOR Certification.

In particular, for sheets, this guarantees:

- Compliance with thicknesses and their tolerances;
- A VICAT softening point $\geq 105^{\circ}\text{C}$;
- Water absorption ≤ 40 mg;
- Thermal stability during its transformation (no surface deterioration);
- A tensile strength greater than 60 MPa;
- Stability of colours to light and hot water;
- Resistance to chemicals, hot water and staining.

All these tests check the fitness of sheets for sanitary uses.

How does one recognize a NF product?

In this catalogue, to distinguish products that have been admitted to the NF mark from those that have not, the logo  is placed next to the certified item.

Moreover to recognize them during installation, the  logo is placed either on the sheets protective film or on the sheets packaging.





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Altuglas International, a global integrated leader in PMMA is heavily involved in the technical plastic sector – from MMA monomer to PMMA acrylic glass - creating and manufacturing innovative products to suit customers' needs worldwide. Its highly committed staff make their contribution daily in our three businesses (MMA, sheet and PMMA resins). Its four great brand names are references: Altuglas®, Plexiglas® (Americas), Oroglas®, Solarkote®.

For further information please contact us. Please consult Arkema's disclaimer regarding the use of Arkema's products on <http://www.arkema.com/en/products/product-safety/disclaimer/index.html>

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