



Altuglas International has invented the first flexible acrylic sheet - ShieldUp® Flex –

The flexible acrylic sheet, ShieldUp® Flex, gives designers greater freedom to shape their 2D pieces and simplifies the manufacturing processes. Lalou Roucayrol attests to this with his new trimaran, Arkema 4, the glazings use ShieldUp® Flex acrylic glass. A wonderful example for this world premiere, paving the way into many other markets.

A major innovation in the world of transparent flexible plastic, ShieldUp® Flex acrylic sheet can be bent manually, without any thermoforming. This technical revolution saves time and money in the design of 2D curved pieces or other that demand flexible material. The Altuglas International research team, based at the Lacq Research Center (France), has managed to overcome a key technological hurdle of PMMA, previously known for its rigidity. ShieldUp® Flex sheet has been made flexible, without adding any plasticizers and without altering its properties. Additionally, ShieldUp® Flex material is extremely chemical and impact resistant, making this patented innovation the ideal solution for projects that require transparency, durability, lightweight, shock resistance and flexibility.

Lalou Roucayrol, the shipbuilder of the Arkema 4, the group's new Multi50-class trimaran, was specifically looking for this **unprecedented combination of benefits** for the boat's glazings (roof and cockpit):

- **perfect visibility and very strong shock resistance** under extreme weather conditions, **to enhance skipper safety**
- **a significant weight reduction**, to further the constant pursuit of improved boat performance levels, thanks to the use of a thinner sheet
- **easy window installation.**





ShieldUp® Flex sheet satisfied all of those expectations, in particular its implementation: simplified processing through the complete elimination of the thermoforming step. This allowed the designers to manually bend the cut sheet to the desired dimensions and glue it directly to the boat. As Lalou puts it, **“ShieldUp® Flex was THE product we’d been waiting for: reduced weight, better resistance and, above all, flexible implementation without the need for a long and painstaking thermoforming phase. Thank you Flex!”** No possibility of mistakes and precious time saved on projects! This is a terrific example of one application of this **world premiere**, on board of the Arkema 4 trimaran, to whose crew we wish fair winds!

Over and above its easy implementation, the new flexible acrylic sheet, **ShieldUp® Flex, also opens up new design possibilities for 2D curved pieces.** We will find it used in traditional PMMA applications like vehicle glazings (RVs, boats, cars, motorcycles, etc.), but also in industrial glazings, signage, lighting, interior architecture and design, as well as COVID-secure protective screens. There is no doubt that this kind of innovation will pave the way for new applications, be they in electronics (smart object screens) or personal protective equipment, a field that is more relevant today than ever.

Welcome to the world of Altuglas International, an Arkema Group subsidiary

A world leader in PMMA technology, Altuglas International is highly involved in the technical plastic sector, ranging from MAM monomers to PMMA acrylic glass. Altuglas International designs and manufactures innovative products tailored to our global customers' needs. Our strongly committed employees contribute daily to our three business areas: MAM,

Building on its unique set of expertise in materials science, Arkema offers a portfolio of first-class technologies to address ever-growing demand for new and sustainable materials. With the ambition to become in 2024 a pure player in Specialty Materials, the Group is structured into 3 complementary, resilient and highly innovative segments dedicated to Specialty Materials -Adhesive solutions, Advanced Materials, and Coating Solutions- accounting for some 80% of Group sales, and a well-positioned and competitive Intermediates segment. Arkema offers cutting-edge technological solutions to meet the challenges of, among other things, new energies, access to water, recycling, urbanization and mobility, and fosters a permanent dialogue with all its stakeholders. The Group reported sales of €8.7 billion in 2019, and operates in some 55 countries with 20,500 employees worldwide. www.arkema.com PMMA resin and sheet. Our four main brands set the market standard: Altuglas®, Plexiglas® (Americas region), Oroglas® and Solarkote®.

PRESS CONTACT

Pascale Bertholom

+33 (0)1 78 66 23 21

pascale.bertholom@altuglasint.com

PRODUCT CONTACT

Marilyne Hurtado

+33 (0)1 78 66 23 36

marilyne.hurtado@altuglasint.com

Altuglas International

420, d'Estienne d'Orves – F-92705 Colombes Cedex – France

Tél. : +33 1 78 66 23 00

Société par actions simplifiée – 388 432 171 RCS Nanterre

altuglasint.com