



acrylic  
sheets

for swim spa  
applications

2023 GLOBAL  
ENGLISH

ACRYSWIM™ 



## ACRYSWIM™

The AcrySwim™ continuous cast monolithic and AcrySwim™ Plus highly engineered composite acrylic sheets belong to the WELLNESS focused portfolio by Aristech Surfaces LLC. They have been designed to meet the specific needs of swim spa manufacturing. Their cross-linked molecular structure improves the material's performance in terms of UV, chemical and dirt resistance.

From a manufacturing perspective, these sheets benefit from increased heat resistance, which reduces material shrinkage during thermoforming and helps prevent tears and punctures. AcrySwim™ is offered in a selection of solid, metallic, stone-like, opalescent or veined colors, in sheet or coiled reel up to 108 in./2740 mm width, for its OEM customers.





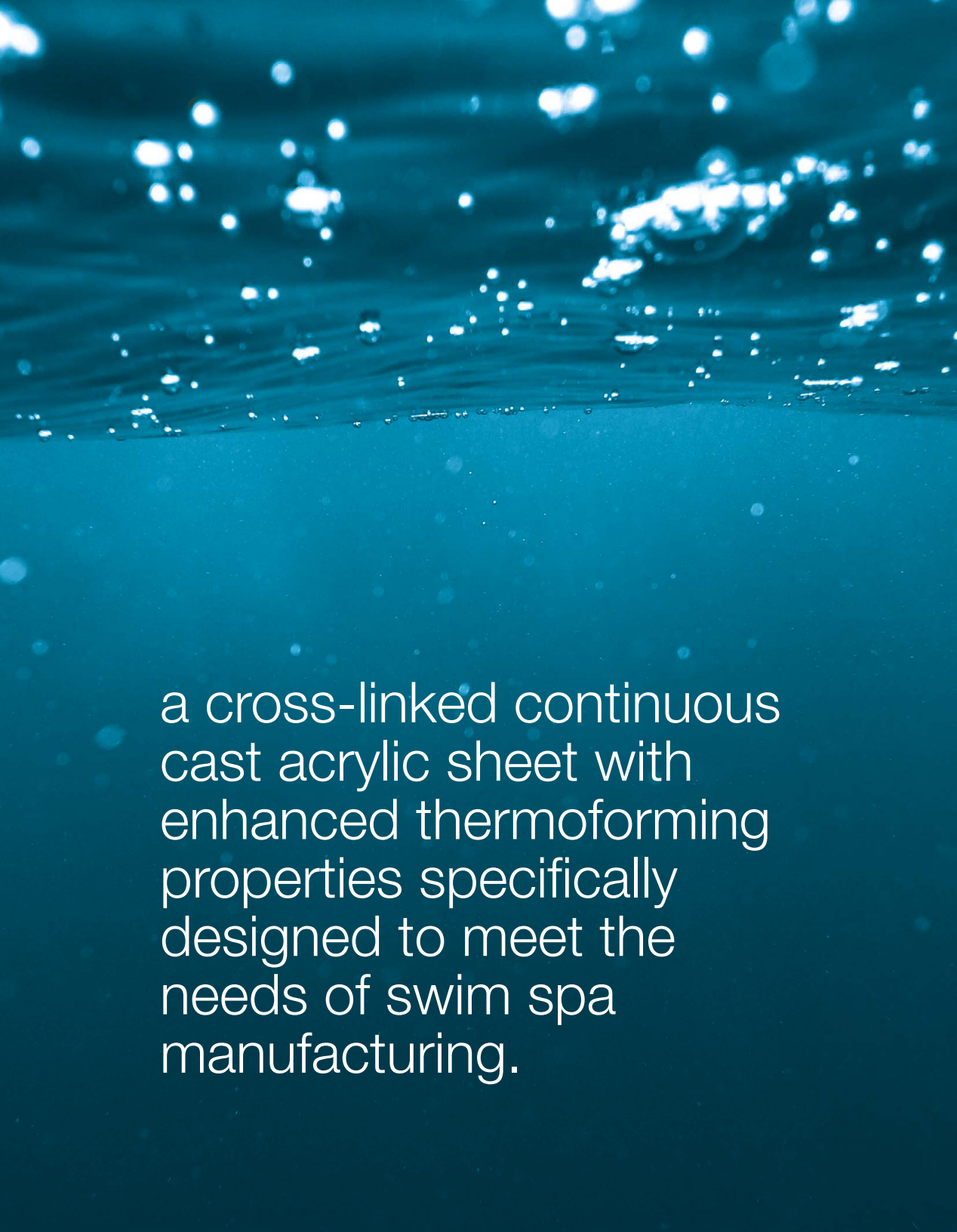
# AcrySwim™ monolithic

AcrySwim™ specially formulated monolithic acrylic sheet has a special molecular structure, which provides superior product and performance properties. It is weather, chemical and stain resistant, in addition to having a durable, long lasting color fastness and high gloss surface. Spa manufacturers have used AcrySwim™ monolithic sheet as the surface material on their premier line of spa products. AcrySwim™ is available in a variety of colors and textures, including many stunning marbled patterns. AcrySwim™ can also be custom matched to your specific needs, and maintain color consistency from production run to production run.



The superior performance characteristics of AcrySwim™ offer spa manufacturers a durable surface with long-lasting aesthetics. The sheet is easily thermoformable, and can even be reheated and reformed if the need in manufacturing arises.

From the home owner perspective, there is an appreciation for its inherent stain and mildew resistance, as well as its ease of cleaning. Just wiping it down with a mild detergent is all that's required to make it look like new. The color vibrancy is complimented by the pristine high gloss finish, and shines like new for years to come. AcrySwim™ monolithic acrylic sheet is unique, when compared to other competitive materials due to the color permanently cast throughout the full thickness of the product, not just on the visible surface. AcrySwim™ acrylic maintains it's 'new' appeal, even after years of use and repetitive cleaning regimes, in residential or commercial environments.



a cross-linked continuous  
cast acrylic sheet with  
enhanced thermoforming  
properties specifically  
designed to meet the  
needs of swim spa  
manufacturing.



# AcrySwim™ Plus

**AcrySwim™ Plus is the best of both worlds. A highly-engineered continuous cast monolithic acrylic sheet, with all the performance characteristic advantages, combined with all the strength benefits of a high-strength substrate. A result of decades of Aristech Surfaces' knowledge and expertise in the continuous cast acrylic sheet technology. These two materials are permanently bonded together to form a composite 'plus' sheet with outstanding physical properties and unmatched aesthetic features.**

AcrySwim™ Plus is a very dynamic product with an array of great performance characteristics. Its durability, long-lasting color-fastness and full aesthetic range have made it the manufacturers' choice for their premier surface material in their high-end line of spas.

AcrySwim™ Plus provides the sustainable manufacturing alternative, reducing production times and in some cases, eliminating the need for fiberglass reinforcement altogether. From the end user perspective, they appreciate its non-porous, stain and mildew resistance as well as its ease of cleaning, in both the residential and commercial space.

a composite  
engineered  
materials  
combined with  
a high-impact  
substrate  
for added  
strength as  
a liner in  
swim spas.



# lab-matched, personalized color

**our expertise in color and aesthetic development, in a range of materials types, directly alongside our customers has proven itself to be a collaborative and fruitful venture for both parties, time and time again. With over 100 years of combined expertise in our R&D color lab, bring us your challenge to meet the specific needs of your customers and we will simply provide you the result.**

For more details on this program, and minimum order quantities that would apply, reach out to your regional manager for additional details.

A close-up of two hands holding a white color measurement device (colorimeter) over a surface. The device has a small screen and buttons. The background is a solid blue color.

lab-matched  
expertise,  
personalized  
color  
development  
program

## standard colors



Silver White Marble 6427



Gypsum II 9514



Oceanwave Opal 6811



Midnight Opal 6878





customized  
size in sheet or  
reel

**LENGTH, WIDTH, THICKNESS, COLOR...**  
**You Decide. The ultimate in flexibility for  
our customers.**

ultimate  
flexibility

From the simplest format to the most unusual designs, Aristech Surfaces offers you an infinitely wide array of options to meet your manufacturing needs.





# personalized sizing means the optimal size for your manufacturing process

With our continuous cast production method, Aristech Surfaces is your choice, in customized manufacturing. Whatever width, length, caliper and color you choose.

- **WIDTHS up to 108 in.**
- **LENGTHS are up to you!**  
Sheets up to 200 in. and more!
- **REELS are impacted by Caliper,**  
but can span up to 700'!
- **CALIPER THICKNESS from 3 mm**  
up to 19 mm
- **COLOR AND AESTHETIC,** we'll work  
directly with your designer to bring  
their vision to life.



## saves time

The use of the optimal size sheets reduces time within the manufacturing process to cut, or modify for a specific production run.

## sustainable choice

The choice of an optimal format reduces scrap. Less scrap means taking a step forward, to help our environment.

Reach out to your Regional Manager today, additional details on your next customized solution.

Customized Sizing Program in Sheet or Reel.



## technical properties AcrySwim™

property	typical values	units	test method
<b>general</b>			
Thickness	0.125 (3.17)	Inch (mm)	—
Specific Gravity	1.19	—	ASTM D-792
<b>mechanical</b>			
Tensile Strength	10,000 (68.9)	psi (MPa)	ASTM D-638
Tensile Modulus	450,000 (3,171)	psi (MPa)	ASTM D-638
Tensile Elongation	4.0	%	ASTM D-638
Flexural Strength	15,500 (106)	psi (MPa)	ASTM D-790
Flexural Modulus	410,000 (3,102)	psi (MPa)	ASTM D-790
Notched Izod Impact	0.4 (2.1)	ft-lb/in. of notch (kJ/mÇ)	ASTM D-256 (Method A)
Charpy Impact (Un-notched)	4.6 (24.2)	ft-lb./in. (kJ/mÇ)	ASTM D-6110
Falling Dart Impact	3.0 (4.1)	ft.-lbs. (J)	FTMS 406-M-1074
Rockwell Hardness (M)	90-100	—	ASTM D-785
Barcol Hardness	48-52	—	ASTM D-2583
<b>thermal</b>			
Hot Forming Temperature	340-380 (171-193)	°F (°C)	Aristech Method
DTUL @ 264 psi (1.82 MPa)	190 (88)	°F (°C)	ASTM D-648
Thermal Conductivity	1.4 (20.2)	Btu/(h·ftÇ·°F/in) (W/(mÇ·K/cm))	Cinco-Fitch
Specific Heat	0.35 (1465)	Btu/(lb·°F) (J/(kg·K))	ASTM C-351
Coefficient of Linear Thermal Expansion	0.000041 (.000074)	in./in./°F (cm/cm/°C)	ASTM D-696
Thermal Stability 30 min.@ 356°F(180°C)	No degradation	—	ASTM D-4802
Flammability	94 HB	—	UL Test # 94
<b>miscellaneous</b>			
Water Absorption	0.33	%	ASTM D-570







## technical properties AcrySwim™ Plus

property	typical values	units	test method
<b>general</b>			
Thickness	0.275 (6.99)	Inch (mm)	—
Specific gravity	1.10	—	ASTM D-792
<b>mechanical</b>			
Tensile strength	6,500 (44.8)	psi (MPa)	ASTM D-638
Tensile modulus	380,000 (2,620)	psi (MPa)	ASTM D-638
Tensile elongation	5.0	%	ASTM D-638
Flexural strength (acrylic in compression)	10,000 (68.9)	psi (MPa)	ASTM D-790
Flexural modulus (acrylic in compression)	310,000 (2,137)	psi (MPa)	ASTM D-790
Flexural strength (acrylic in tension)	10,800 (74.5)	psi (MPa)	ASTM D-790
Flexural modulus (acrylic in tension)	314,000 (2,165)	psi (MPa)	ASTM D-790
Notched Izod impact	2.4 (12.6)	ft-lb/in .of notch (kJ/m <sup>2</sup> )	ASTM D-256 (Method A)
Falling dart impact	> 30 (40.7)**	ft.-lbs. (J)	FTMS 406-M-107 4
Rockwell hardness (m)	97	—	ASTM D-785
Barcol hardness	52	—	ASTM D-2583
<b>thermal</b>			
Hot Forming Temperature (acrylic side)	350-380 (177-193)	°F (°C)	Aristech Method
Hot Forming Temperature (ABS side)	300-340 (149-171)	°F (°C)	Aristech Method
DTUL@ 264 psi (1.82 MPa)	193.0 (89.4)	°F (°C)	ASTM D-648
Coefficient of thermal expansion	0.000044 (.000079)	in./in./°F (cm/cm/°C)	ASTM D-696
Flammability	94HB	—	UL Test #94
<b>miscellaneous</b>			
Water absorption	0.19	%	ASTM D-570
Gardner Gloss (60 Angle)	—	—	ASTM D-523
Odor	None	—	—
Taste	None	—	—
50 Cycles Freeze-Thaw -20°F (-29°C) to 180°F (82.2°C)	No effect	—	Aristech Method

\*\* Actual value higher — This is the limit of the test apparatus.





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