

ACRYSTEEL®

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BLUE SHIRT
\$14,99

IMPACT MODIFIED ACRYLICS
PREMIUM CONTINUOUS CAST
FOR BUILDING AND CONSTRUCTION



ACRYSTEEL®

ARISTECH SURFACES LLC IS A LEADING MANUFACTURER AND DISTRIBUTOR OF ACRYLIC SHEETS FOR A WIDE RANGE OF USES: CUSTOM THERMOFORMING, MULTI-PURPOSE USE, P.O.P., SIGNAGE, GLAZING AND MORE. WITH 50 YEARS OF EXPERIENCE, THIS U.S. BASED COMPANY DRAWS ON ITS EXPERTISE TO PRODUCE RELIABLE, TOP-QUALITY PRODUCTS.

Inventories of all acrylic sheet products are maintained at our Florence, KY production facility and strategically placed in warehouses worldwide. Our well-stocked inventories allow us to provide combination orders for all grades of our acrylic sheet at one time.



CHARACTERISTICS

AcrySTEEL® IMPACT-MODIFIED ACRYLIC DELIVERS INCREDIBLE HIGH-IMPACT PERFORMANCE AND WEATHER RESISTANCE WHILE OFFERING THE COLORS YOU NEED AND CUSTOMIZATION YOU CRAVE. PLUS, THIS DURABLE, LONG-LASTING ACRYLIC SHEET IS AN ENGINEERED THERMOPLASTIC POSSESSING AN EXCELLENT BALANCE OF PHYSICAL PROPERTIES AND PERFORMANCE CHARACTERISTICS THAT ARE OTHERWISE NOT AVAILABLE IN OTHER ENGINEERED, SHEET PRODUCTS.

This acrylic is ideal for applications requiring more impact resistance than general-purpose acrylic while keeping its thermoforming capacity.

IMPACT RESISTANT

AcrySTEEL® acrylic is impressively impact-resistant, especially when being compared to glass and even other acrylic products with a ball drop impact strength up to six times greater than ordinary acrylic. Sheet breakage is significantly reduced during manufacturing, transportation, long term installation and end-use.

THERMOFORMING

AcrySTEEL® sheets can be thermoformed or heated in sheet hanging ovens and free-formed without excessive shrinkage or draping. This sheet has a wide thermoforming temperature range (350 – 390 °F), providing the flexibility you need to form difficult parts with greater details at high temperatures, or to form less complicated parts at lower temperatures for faster production rates. When comparing to polycarbonate sheets, AcrySTEEL® saves time by not needing the pre-drying process prior to thermoforming.

WEATHER & ABRASION RESISTANT

Weathering tests and field exposure have shown that AcrySTEEL® sheets have remarkable non-yellowing and impact resistance property retention far superior to other acrylic products on the market today. Plus, the higher Barcol hardness of this product offers better resistance to abrasion caused by airborne dirt and dust particles. This means long-lasting durability in extreme temperatures and environments – perfect for signage and other outdoor wear and tear.

NATURALLY UV RESISTANT & RIGIDITY

AcrySTEEL® products are high-gloss, hard-surfaced thermoplastics that do not require special surface preparation. They perform a UV barrier naturally and don't require a special barrier coating or tint hiding agents that can deteriorate over time. Due to AcrySTEEL® sheets being more rigid than other products, they're less likely to bow or pull out of a retaining frame.





COLORS

Unlimited colors of AcrySTEEL® allow you incomparable design liberty.

Leading brands continue to choose AcrySTEEL® by Aristech Surfaces because of its proven track record at consistently retaining color and appearance over time. Custom color possibilities include:

- Custom tints and opacities for light transmission and backlight applications
- Custom color aesthetics including vibrancy, metallics and transluents
- Custom color-matching capabilities to seamlessly add to your existing collateral

Our color laboratory is staffed by experienced personnel and can provide quality standard and custom colors to meet your specifications. As your best single source for premium acrylic sheet product, Aristech Surfaces encourages you to present us with your most challenging problem or demanding application.





APPLICATIONS

AcrySTEEL® ACRYLIC IS IDEAL FOR P.O.P., SIGNAGE, GLAZING AND GENERAL FABRICATION APPLICATIONS AND IS THE PERFECT CHOICE TO MAKE WHEN EXTREME IMPACT RESISTANCE AND UV EXPOSURE IS YOUR MAJOR CONSIDERATION. THIS ACRYLIC SHEET PRODUCT DEMONSTRATES EXCELLENT STRENGTH AND DURABILITY OVER THE LONG TERM IN COMPARISON TO POLYCARBONATE WHICH BECOMES BRITTLE AFTER UV EXPOSURE.

P.O.P.

With its impact resistance and hygienic properties, AcrySTEEL® acrylic helps companies worldwide display their promotions clearly. Point of purchase signage and advertising using AcrySTEEL® provide retail spaces the vehicle to promote to multiple retail segments.

SIGNAGE

AcrySTEEL® acrylic is the durable choice for longer-lasting signs. Thanks to our color-matching and color customization process, you now have a plethora of selections right at your fingertips. Plus, AcrySTEEL® is naturally UV resistant and weather resistant to both the sun and extreme heat, circumventing damage in indoor or outdoor environments, all the while outperforming polycarbonate and extruded acrylic in several ways.

GLAZING

Choose AcrySTEEL® for glazing applications when you want to make your acrylic products even stronger. The tremendous impact resistance of this acrylic product makes it the material of choice for your glazing needs, including commercial building windows, vehicle windshield screens, caravan skylights, motorcycle windshields and more.

... DISPLAY STANDS, FIXTURES AND MORE.



MANUFACTURING CAPABILITIES

ARISTECH SURFACES IS A 50 YEAR INDUSTRY LEADER IN CONTINUOUS CAST ACRYLIC - SUPPLIED IN BOTH STANDARD SIZE SHEETS AND CUSTOMIZABLE ROLLS. AcrySTEEL® CAN BE SUPPLIED IN WIDTHS UP TO 108 IN. AND UP TO 750 FT. TO TAILOR OUR PRODUCT TO YOUR EXACT NEEDS. IT CAN ALSO BE CUT TO FRACTIONAL SIZES TO COMPLY WITH CLOSE TOLERANCES REQUIRED BY YOUR SPECIFICATIONS.

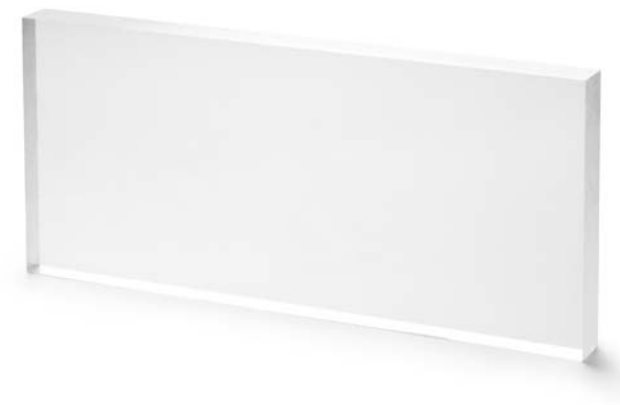
Choosing AcrySTEEL® means choosing:

- Four of the world's largest continuous cast machines
- Custom sizing including varying size, calipers and continuous cast reels up to 108 inches wide and up to 750 ft. in length on Reels
- In-process quality checks for the best acrylic on the market
- A USA-made product created with world-class research & development

Because we use the continuous cast method to create AcrySTEEL® acrylic, Aristech Surfaces can better provide you with larger sheets and reels, customizable colors or tints and cut-to-size opportunities to save on your shipping costs. We get the product to you, easier.

REFORMING ABILITIES

AcrySTEEL® sheets are very forgiving: they can be reheated and reformed into a very acceptable part. The ability to re-form reduces waste, making AcrySTEEL® ideal for prototype work, thermoforming start-up, short production runs and trouble-shooting.



AcrySTEEL® CUSTOM SIZES

THE FOOTBALL-FIELD-LENGTH CASTING MACHINES AT ARISTECH SURFACES ARE CAPABLE OF PRODUCING ANY VARIETY OF AcrySTEEL® UP TO 108 IN./274 CM WIDE, AND 3500+ SHEETS PER DAY. THIS ALLOWS MANUFACTURERS TO MINIMIZE THEIR SCRAP COSTS BY TAILORING THEIR SHEET SIZE TO THE PRODUCTS TO BE MANUFACTURED.

AcrySTEEL® impact modified specialty acrylic is available in a wide variety of standard and customizable colors in the following sizes:

- 48 in. x 96 in. standard sheet size available
- Up to 108 in. wide production reels, up to 750 ft. in length available upon request
- 0.118 in., 0.177 in., 0.220 in., 0.236 in. standard thicknesses available
- Up to 0.472 in. thickness, available upon request

Or, customize your AcrySTEEL® sheet to the exact size to suit your needs while minimizing labor and scrap costs.

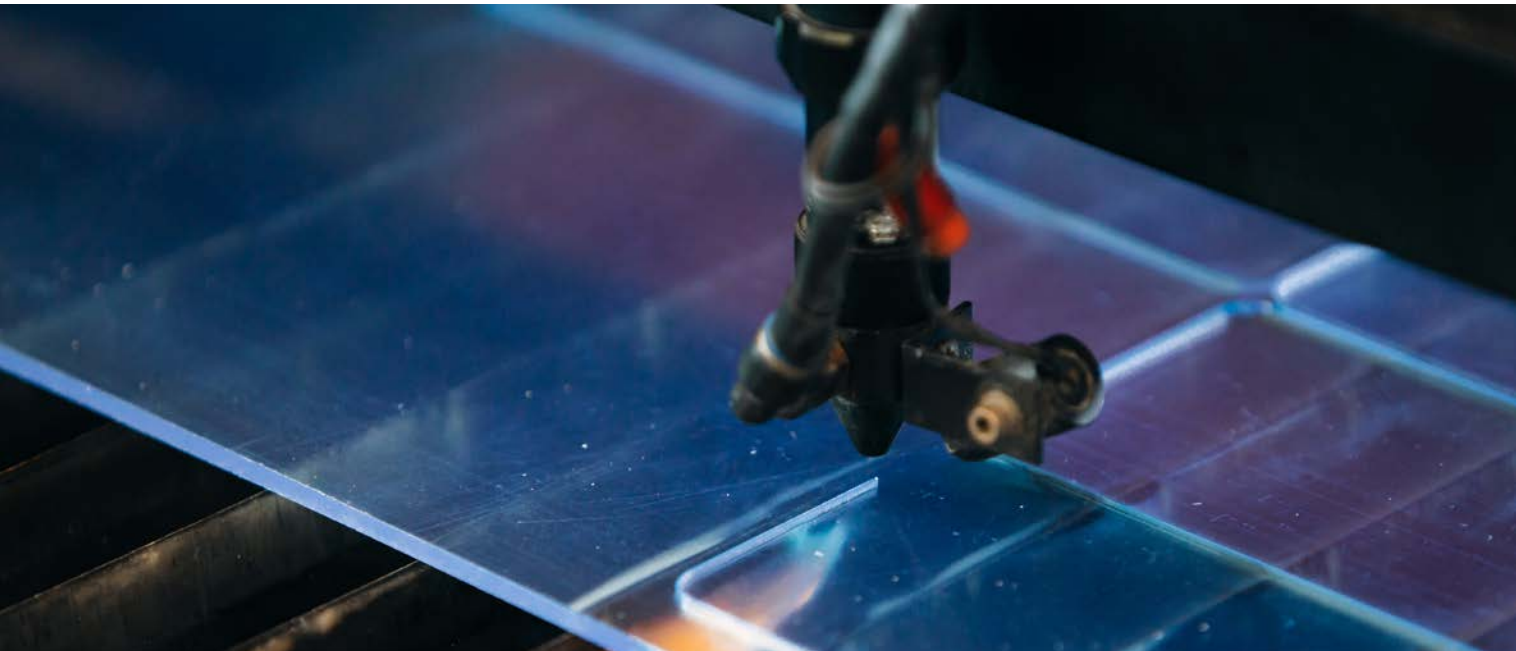


PHYSICAL PROPERTIES

AcrySTEEL® is a specialty continuous cast impact-modified acrylic sheet derived from a unique formulation which is easily fabricated and solvent cementable. The following physical properties were determined using 0.125 in. (3.17 mm) thickness clear. Properties may vary somewhat on other thicknesses and/or colors (translucent, transparent or opaque).

| PROPERTY | TYPICAL VALUES | UNITS | TEST METHOD |
|--|---|---------------------------------|-----------------------|
| General | | | |
| Thickness | 0.125 (3.17) | Inch (mm) | — |
| Specific gravity | 1.17 | — | ASTM D-792 |
| Optical | | | |
| Refractive index | 1.49 | — | ASTM D-542 |
| Light transmission | 91.0 | % | ASTM D-1003 |
| Yellowness index | 1.80 (0.125"/3.17 mm) 2.00 (0.187"/4.75 mm) 2.20 (0.220"/5.58 mm) | YI | ASTM E-313 |
| Mechanical | | | |
| Tensile strength | 7,400 (51) | psi (MPa) | ASTM D-638 |
| Tensile modulus | 364,000 (2,509) | psi (MPa) | ASTM D-638 |
| Tensile elongation | 10 | % | ASTM D-638 |
| Flexural strength | 13,500 (93) | psi (MPa) | ASTM D-790 |
| Flexural modulus | 380,000 (2,620) | psi (MPa) | ASTM D-790 |
| Notched izod impact | 0.8 (4.2) | ft.-lb/in.of notch (kJ/m²) | ASTM D-256 (Method A) |
| Charpy impact (un-notched) | 11(57.8) | ft.-lb/in.(kJ/m²) | ASTM D-6110 |
| Falling dart impact | 16 (0.187") 21.7(4.75 mm) | ft.-lbs. J | FTMS 406-M-1074 |
| Rockwell hardness (m) | 80 | — | ASTM D-785 |
| Barcol hardness | 40 | — | ASTM D-2583 |
| Thermal | | | |
| Hot forming temperature | 340-380 (171-193) | °F (°C) | Aristech Method |
| DTUL @264 psi (1.82 MPa) | 180 (82.2) | °F (°C) | ASTM D-648 |
| Thermal conductivity | 1.4 (20.2) | Btu/(h-ft²-°F/in) (W/(m²-K/cm)) | Cinco-Fitch |
| Coefficient of linear thermal expansion | 4.2x10 ⁻⁵ (7.6x10 ⁻⁵) | in./in./°F (cm/cm/°C) | ASTM D-696 |
| Thermal stability 30 min. @ 356°F (180°C) | No Effect | — | ASTM D-4802 |
| Flammability | 94 HB | — | UL Test # 94 |
| Miscellaneous | | | |
| Water absorption | 0.30 | % | ASTM D-570 |
| Odor | None | — | — |
| Taste | None | — | — |

For cautions and other information relating to handling of an exposure to this product, please see the applicable material safety data sheet published by Aristech Surfaces.



| PROPERTY/ CHARACTERISTIC (3 mm) | AcrySTEEL® | AcryClear™ | AcryBright™ | PC (standard) | PETG | EXTRUDED ACRYLIC (not modified) | EXTRUDED ACRYLIC (impact- modified) |
|---------------------------------------|------------|------------|-------------|------------------|-----------|---------------------------------------|--|
| Chemical resistance | Excellent | Excellent | Excellent | Poor | Fair | Fair | Fair |
| Edge finishing | Excellent | Excellent | Excellent | Poor | Poor | Poor | Poor |
| Flammability | Poor | Poor | Poor | Fair | Fair | Poor | Poor |
| Formability | Excellent | Excellent | Fair | Fair | Excellent | Fair | Fair |
| Lightweight/ Handling | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Hygienic/ Bacteriostatic | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Impact strength | Excellent | Fair | Fair | Excellent | Excellent | Fair | Excellent |
| Optics/Light transmission | Excellent | Excellent | Excellent | Fair | Fair | Excellent | Fair |
| Scratch resistance | Fair | Fair | Fair | Poor | Poor | Fair | Fair |
| Surface reparability | Excellent | Excellent | Excellent | Poor | Poor | Fair | Fair |
| UV stability | Excellent | Excellent | Excellent | Poor | Poor | Excellent | Excellent |

These instructions are based upon experience with Aristech Surfaces products only. Experience with products of other manufacturers is specifically disclaimed. For most uses, check for local code approval and test for application suitability. These procedures, techniques and suggested materials should only be used by personnel who are properly trained in the safe handling of the chemicals and the equipment with which they are working. Avoid aromatic solvents, clean with mild soap and water, avoid abrasives. These suggestions are based on information believed to be reliable, however, Aristech Surfaces makes no warranty, guarantee, or representation and assumes no obligations or liability as to the absolute correctness or sufficiency of any of the foregoing, or that additional or other measures may not be required under particular conditions or circumstances.



For 50 years, Aristech Surfaces has produced and marketed a broad range of surface and design materials to provide quality, cost-conscious and high-end aesthetic solutions sought by OEMs, architects, designers and fabricators for industries around the globe. Aristech Surfaces corporate headquarters is located in Florence, KY and has multiple manufacturing facilities, a worldwide distribution network and global sales force to service the needs of customers.

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NEW AND INSPIRING IDEAS EACH WEEK.

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