

General Properties – AcrySpa™ Plus I-300+

Introduction

AcrySpa™ Plus is a revolutionary composite engineered material that has a continuous cast acrylic surface combined with a high-impact substrate material for added strength. The acrylic surface is AcrySpa™ I-300 continuous cast opaque sheet with its proven weathering characteristic and general aesthetics. The substrate is a high impact grade ABS that imparts outstanding impact resistance and thermoformability to the total composite.

Many thermoforming applications like spas, recreational vehicles, pool steps and marine components demand outstanding weathering characteristics, toughness, and impact resistance. Aristech Surfaces AcrySpa™ Plus is truly without peer as a weatherable, thermoformable thermoplastic composite sheet. Additionally, AcrySpa™ Plus offers customers environmental and production advantages over alternative materials and methods of production.

AcrySpa™ Plus is offered in a variety of opaque marbled patterns and solid colors. It is available in various sizes and calipers depending on the application.

Weather resistance

The AcrySpa™ Plus acrylic surface is virtually unaffected by weathering even after many years exposure in areas such as Florida and Arizona. AcrySpa™ Plus has the same continuous cast acrylic surface as other well-known Aristech Surfaces products that have

performed exceptionally well in outdoor applications for twenty or more years.

Impact resistance

AcrySpa™ Plus has impact resistance far greater than regular acrylic. The cast acrylic/ABS composite actually takes on the impact properties of the high impact grade ABS substrate which has been engineered for this purpose. Unlike other thermoplastics and composites, this outstanding impact resistance is retained as the sheet weathers.

Thermoformability

AcrySpa™ Plus can be thermoformed on either dual or single side thermoforming equipment, targeting an oven residence time of around five minutes. In all forming situations, the acrylic side should be heated to 350 - 380°F (177 - 193°C) while the ABS side is to be maintained at 300 - 340°F (149 - 171°C).

Fabrication

AcrySpa™ Plus can be cut, drilled and machined similar to Aristech Surfaces other cast acrylic sheet products. In addition, shearing and punching techniques under controlled conditions may be used since AcrySpa™ Plus has many of the attributes of its high impact ABS substrate fabrication.

Reinforcement or support

Through the implementation of the Clean Air Act of 1990, the government is putting pressure on industry to reduce styrene emissions from polyester/fiberglass spray-up operations. AcrySpa™ Plus helps customers reduce emissions by potentially eliminating the need for fiberglass reinforcement. Depending on the shape and depth of draw, AcrySpa™ Plus may or may not require any post-support or reinforcement.

In summary, AcrySpa™ Plus offers the best of both cast acrylic and ABS, giving it performance

properties unequaled by any other known thermoplastic. For more information on

AcrySpa™ Plus, contact Aristech Surfaces Technical Service toll free at (800) 354-9858.

Note: for cautions and information on exposure to any Aristech Surfaces' product, please see the applicable material safety data sheet.

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