

Acrylite[®] OP-4

ACRYLIC SHEET

*the True
Measure of
Performance*

A tanning bed is a very demanding application even for acrylic sheet. The use of tanning lotions and disinfectants can promote the premature development of stress cracks and fractures. This cracking typically continues to increase in severity until the panel needs to be replaced. Replacement, due to stress cracking, generally occurs long before there is any loss of UV light transmission through the acrylic sheet. Therefore, both resistance to chemical attack and extended UV light transmission, must be considered when evaluating the performance of an acrylic sheet for tanning bed applications.

While many competitive acrylic sheet products have comparable levels of ultraviolet light transmission, ACRYLITE[®] OP-4 acrylic sheet offers superior resistance to chemical attack.

A test procedure was developed to evaluate a tanning bed material's resistance to chemical attack. The procedure determines what internal stress level would initiate crazing when exposed to a particular chemical. Acrylic sheet samples are continuously exposed to the chemical at an elevated temperature for an extended time period. The samples are then analyzed and the stress at failure is measured. A higher stress value will be obtained on a material with a superior chemical resistance. The following results reflect the performance of ACRYLITE[®] OP-4 sheet compared to an extruded sun tan bed material from a major acrylic manufacturer using this test procedure.

Stress Level to Initiate Failure

Tanning Lotion	ACRYLITE [®] OP-4	Competitive
California Tan [®] Tropical Rage [™] Oil ₁	4.4 N/mm ²	Fracture
California Tan [®] Tropical Sizzle [™] ₂	6.6 N/mm ²	Fracture
California Tan [®] Tropical Fusion [™] ₂	9.1 N/mm ²	Fracture
California Tan [®] Tropical Fever [™] ₂	18.4 N/mm ²	Fracture
Body [®] Drench U.T.F. ₃	7.0 N/mm ²	Fracture
Body [®] Drench Tan Amplifying Oil ₃	5.4 N/mm ²	Fracture
Body [®] Drench Tan Amplifying Spray ₃	17.0 N/mm ²	Fracture
Body [®] Drench UV Amplifying Lotion ₄	4.2 N/mm ²	Fracture
Body [®] Drench Tan Accelerating Lotion ₃	7.0 N/mm ²	Fracture
Body [®] Drench Boost Tan Vitalizer ₄	8.3 N/mm ²	Fracture
Swedish Beauty Tanning Accelerator ₅	7.3 N/mm ²	Fracture
Supre Jam Tan Maximizing Lotion ₆	13.3 N/mm ²	Fracture

1 Product of California SunCare Inc.; Beverly Hills, CA

2 Product of California Tan's Scientific Research Center; Beverly Hills, CA

3 Product of Designs by Norvell, Inc.; Alexandria, TN

4 Product of Body Drench Systems; Alexandria, VA

5 Product of Carina Products; USA

6 Product of Supre, Inc.; Dallas, TX

The samples of the competitive material *fractured* while the test was still in progress for all twelve of the tested lotions. The results clearly confirm that ACRYLITE[®] OP-4 sheet offers superior chemical resistance over the competitive product. This means a higher quality finished part with better durability and less product failures while in service.



Superior resistance to chemical attack coupled with an unprecedented 10,000 hour warranty clearly make ACRYLITE[®] OP-4 sheet the tanning bed material of choice.

CYRO Industries, 25 Executive Boulevard, Orange, CT 06477 www.cyro.com (203) 795-6081

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technical bulletin