

IceCap™ Pro Product Data

Following are the ASTM test results and product data for the **IceCap™ Pro** polyurethane composite ice floor cover.

<u>Data</u>	<u>Method</u>	<u>Metric</u>	
Sheet Size		1225x2445mm	
Thickness		2.54 cm	
Weight		24.94 kg	
Colour		Grey	
Top Surface Texture		Elephant Skin	
Bottom Surface		Waffle	
K Factor	ASTM C518	3.30	
Flexural Strength (psi)	ASTMD790	1287.1	90492 gram-force/cm ²
Flexural Strength Young's Modulus (psi)	ASTMD790	5365	3771968 gram-force/cm ²
Compressive Strength 10% Crush (psi)	ASTMD695	516.7	36327 gram-force/cm ²
Compressive Strength Young's Modulus (psi)	ASTMD695	12703	893109 gram-force/cm ²
NBS Abrasion (cycles/0.100 in abraded)		69.5	557.7
Tensile Strength (average psi)	ASTMD1037	277.86	19535 gram-force/cm ²
Coefficient of Friction	ASTMD1894	<u>Static</u>	<u>Kinetic</u>
Dry		0.171	0.107
Wet		0.122	0.076

ASTM D 790 Document Information:

Title

Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

ASTM International

Publication Date:

Sep 1, 2007

Scope:

These test methods cover the determination of flexural properties of unreinforced and reinforced plastics, including high-modulus composites and electrical insulating materials in the form of rectangular bars molded directly or cut from sheets, plates, or molded shapes. These test methods are generally applicable to both rigid and semirigid materials. However, flexural strength cannot be determined for those materials that do not break or that do not fail in the outer surface of the test specimen within the 5.0 % strain limit of these test methods. These test methods utilize a three-point loading system applied to a simply supported beam. A four-point loading system method can be found in Test Method D 6272.

ASTM D695

Significance and Use

Compression tests provide information about the compressive properties of plastics when employed under conditions approximating those under which the tests are made.

Compressive properties include modulus of elasticity, yield stress, deformation beyond yield point, and compressive strength (unless the material merely flattens but does not fracture). Materials possessing a low order of ductility may not exhibit a yield point. In the case of a material that fails in compression by a shattering fracture, the compressive strength has a very definite value. In the case of a material that does not fail in compression by a shattering fracture, the compressive strength is an arbitrary one depending upon the degree of distortion that is regarded as indicating complete failure of the material. Many plastic materials will continue to deform in compression until a flat disk is produced, the compressive stress (nominal) rising steadily in the process, without any well-defined fracture occurring. Compressive strength can have no real meaning in such cases.

Compression tests provide a standard method of obtaining data for research and development, quality control, acceptance or rejection under specifications, and special purposes. The tests cannot be considered significant for engineering design in applications differing widely from the load-time scale of the standard test. Such applications require additional tests such as impact, creep, and fatigue.

Before proceeding with this test method, reference should be made to the ASTM specification for the material being tested. Any test specimen preparation, conditioning, dimensions, and testing parameters covered in the materials specification shall take precedence over those mentioned in this test method. If there is no material specification, then the default conditions apply. Table 1 in Classification D 4000 lists the ASTM materials standards that currently exist.

1. Scope

1.1 This test method covers the determination of the mechanical properties of unreinforced and reinforced rigid plastics, including high-modulus composites, when loaded in compression at relatively low uniform rates of straining or loading. Test specimens of standard shape are employed. This procedure is applicable for a composite modulus up to and including 41,370 MPa (6,000,000 psi).

1.2 The values stated in SI units are to be regarded as the standard. The values in parentheses are for information only.