PLAZGAL HIPS - PLASKOLITE EXTRUDED HIGH IMPACT POLYSTYRENE SHEETS

EUROPE

DESCRIPTION

PLASKOLITE EXTRUDED HIPS SHEETS are produced and internally verified to ISO standards and are a cost-effective solution for a wide range of indoor applications, such as display trays, electrical components, toy components, and etc.

PLAZGAL extruded HIPS sheets have low density and high rigidity, good chemical resistance, good optical properties and a matt or brilliant surface. Sheets are easy to fabricate and vacuum-form and can be used in food-contact applications.

PLAZGAL extruded HIPS sheets are available in a range of thicknesses.

TYPICAL PROPERTY

Properties	Method	Units	Xtend PC
General			
Density	ISO 1183	gr/cm^3	1.05
Water Absorption (23°C)	ISO 62	%	0.1
Mechanical			
Tensile Stress at Yield (23°C)	ISO 527	MPa	24
Elongation at Break (23°C)	ISO 527	%	35
Flexural Strength (23°C)	ISO 178	MPa	22
Flexural Modulus (23°C)	ISO 178	MPa	1800
Impact Resistance (Charpy notched)	ISO 179	kJ/m^2	93
Rockwell Hardness	ASTM D785	R-scale	65
Thermal			
Vicat Softening Temp. (50°C/h 50N)	ISO 306	°C	90
Heat Deflection Temp. - 1.8 MPa	ISO 75	°C	74
Coeff. of Linear Thermal - Expansion - 50°C	ISO11359	mm/m · 1°C	0.04
Recommended Continues Service Temperature		°C	60
Recommended Maximum Service Temperature / Short time		°C	80
Minimum Service Temperature		°C	- 40
Electrical			
Surface Resistivity	EC 60093	Ohms	1.0E+13
Volume Resistivity	EC 60093	Ohm·cm	1.0E+18

DIMENSIONS

Thickness, mm	Width, mm	Length, mm
1.5 – 8.0	1000, 1250 and 2050	500 – 6000

Sheets are also available cut-to-size according to customer requirements.

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TOLERANCES FOR DIMENSIONS

Sheet Thickness, mm	Thickness, %	Width Tolerances, mm	Length Tolerances, mm	Diagonals Tolerances, mm	Flatness Tolerances
<1.5	± 8	Sheets cut in production: -0.0 /+3.0 Sheets cut to size: ± 0.50	Sheets cut in production: -0.0 /+3.0 Sheets cut to size: ± 0.50 ≤	Sheets cut in production: Length ≤ 4000 mm - ≤ 2 Length ≤ 4000 mm - ≤ 4 Sheets cut to size: ≤ 0.5 ≤ 0.5	Max allowed bowing - 0.5% from linear dimensions. Max allowed bowing across the width of the sheet - ≤ 5 mm per meter of width. Max allowed bowing along the length of the sheet - ≤ 5 mm per meter of length.
≥ 1.5, < 2.0	± 4				
≥ 2.0, < 15.0	± 3				

COLORS

PLAZGAL HIPS sheets are naturally not transparent and mainly offered in Natural color, Black, and White, however pigments can be added according to customer requirements “The sheets are offered in Natural color and variety of colors like, yellow, green, and etc..

For a details please contact PLASKOLITE Technical Support.

DEFINITIONS

RESISTANCE TO WEATHERING

PLAZGAL HIPS is not recommended for long-term use in the open air as it is degraded by UV radiation. The degradation results in yellowing, loss of surface gloss and by a decrease in mechanical strength. Darker formulations perform better than pale or transparent types.

For detailed information please contact PLASKOLITE Technical Support.

FIRE TEST PERFORMANCE

PLAZGAL extruded HIPS sheets are classified by UL 94 vertical burning classification: HB

CHEMICAL RESISTANCE

PLAZGAL HIPS is resistant to water, alkalis and dilute mineral acids, as well as to aqueous solutions of most salts. However, it swells in some organic solvents and is dissolved by others. This is true of aromatic and chlorinated hydrocarbons, ethers, esters and ketones. PLAZGAL HIPS is also attacked by concentrated sulphuric acid and strong oxidizing agents, e.g. nitric acid, chlorine water, bromine water and sodium hypochlorite solution.

For detailed information please contact PLASKOLITE Technical Support.

ENVIRONMENTAL STRESS CRACKING

Environmental Stress Cracking (ESC) is a result of the combination of stress and chemical exposure. The level of stress needed for ESC is lower than the normal failure mechanical stress of PS in a chemical-free environment. Stresses can be created during fabrication, forming and also by improper installation. PLAZGAL HIPS is very susceptible to stress cracking. Parts with internal stresses as produced by cold bending can form stress cracks even in media to which PS is usually resistant.

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GENERAL GUIDELINES

STORAGE

PLAZGAL HIPS sheets must be stored with their original protective masking in a dry, shady and well ventilated area, with NO EXPOSURE to direct sunlight, wind, dirt or hard objects. Avoid storage in areas with excessive heat (not higher than 50°C) or strong solvents.

Sheets should be stored horizontally on their delivery pallets and placed on a soft material (such as cardboard) to prevent damage. Pay attention to avoiding pressure on the unsupported areas.

PROTECTIVE FILM

Gloss surface of PLAZGAL HIPS sheet are protected by a fully recyclable polyethylene (PE) film. Keep this film in position as long as possible and remove it immediately after installation.

CLEANING & MAINTENANCE

PLAZGAL HIPS extruded sheets are produced in a clean-room environment and do not need to be cleaned before use.

For general purpose cleaning, polystyrene should be washed with clean, cold water to which a little mild detergent has been added. The use of any solvents such as methylated spirits, turpentine, white spirit or any proprietary window cleaning products is neither necessary nor recommended.

Sponges, squeegees, brushes or sharp instruments should not be used for cleaning sheets as they can damage and / or causes scratches in the sheet surface.

ENVIRONMENTAL ADVANTAGES

PLAZGAL HIPS sheets are environmental friendly. The sheets and their polyethylene protective layers are fully recyclable. They do not contain any toxic materials which may cause environmental damage or health risks.

PLAZGAL HIPS sheets can be used for energy recovery and mechanical recycling.

RE-WORKING

- **HANDLING:**

  PLAZGAL HIPS sheets can be cut, sawn, drilled, and milled easily using standard workshop equipment for wood or metal. However, it is always recommended to use specific tools specially designed for plastics.

  For details please contact PLASKOLITE Technical Support.

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.

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