PLASKOLITE SAN – EXTRUDED STYRENE ACRYLONITRILE SHEETS

EUROPE

DESCRIPTION

PLASKOLITE EXTRUDED STYRENE ACRYLONITRILE (SAN) SHEETS are produced and internally verified to ISO standards and are an excellent solution for a wide range of outdoor and indoor applications, such as glazing, interior designs and DIY.

PLASKOLITE SAN copolymer extruded sheets have low density and high stiffness, good thermal and chemical resistance and good transparency. The sheets are easy to handle, easy to vacuum-form and have good dimensional stability.

TYPICAL PROPERTIES

Properties	Method	Units	Value
General			
Density	ASTM D792	Kg/cm^3	1.08
Water Absorption	ASTM D570	%	0.2
Flammability (1.6 mm)	UL94	class	HB
Mechanical			
Tensile Strength (break)	ISO 527-2	MPa	70
Tensile Module	ISO 527-2	MPa	3700
Elongation at Break	ISO 527-2	%	2
Modulus of elasticity	ISO 178	MPa	3700
Flexural Strength	ISO 178	MPa	97
Impact Strength (Charpy notched)	ISO 180	kJ/m^2	1.5
Impact Strength (Charpy unnotched)	ISO 180	kJ/m^2	14
Rockwell Hardness	ISO 180	M-scale	83
Optical			
Refractive Index	ASTM D542	index	1.57
Light Transmission	ASTM D1003	%	86-89
Haze (3mm transparent sheet)	ASTM D1003	%	<2
Thermal			
Vicat Softening Temperature (50N)	ISO 306	°C	106
Heat Deflection Temp.: 1.8 MPa	ISO 75-2/A	°C	98
Coeff. of Linear Thermal Expansion	ISO 11359	1/°C	$5\text{-}7x10^{-5}$
Recommended Continues Service Temperature		°C	70
Maximum Service Temperature (Short cycle operation)		°C	85

DIMENSIONS

Thickness, mm	Width, mm	Length, mm
1.5 – 6.0	1000, 1250, 1500 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 Tolerances, %	Width Tolerances, mm	Length Tolerances, mm	Diagonals Tolerances, mm	Flatness Tolerances
≥ 1.5, < 2.0	± 4	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	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.
≥ 2.0, < 6.0	± 3				

COLORS

PLASKOLITE SAN extruded sheets are naturally colorless, however pigments can be added according to customer requirements. The sheets are offered in clear, diffuser, embossed patterns, opal white, brown and black colors (available upon request, subject to special conditions). The light transmission of PLASKOLITE SAN extruded colored sheets varies depending on the thickness.

For a details please contact PLASKOLITE Technical Support.

DEFINITIONS

RESISTANCE TO WEATHERING

In general SAN plastic degrades over time from exposure to UV radiation resulting in yellowing, loss of surface gloss and by a decrease in mechanical strength. Standard PLASKOLITE SAN sheets are manufactured with UV protection in the sheet bulk giving improved weathering and ageing. For maximum UV protection PLASKOLITE SAN sheets are also available with a special UV-resistant layer on both sides of the sheet (PLASKOLITE SAN DCX) according to customer requirements.

For detailed information please contact PLASKOLITE Technical Support.

FIRE TEST PERFORMANCE

PLASKOLITE SAN extruded sheets are certified for the UL 94 burning classification “HB”.

CHEMICAL RESISTANCE

PLASKOLITE SAN is resistant to water, alkalis and diluted mineral acids as well as to aqueous solutions of most salts. PLASKOLITE SAN has limited resistance to alcohols, aliphatic hydrocarbons, oils and fats and is not resistant to concentrated mineral acids, aromatic and/or halogenated hydrocarbons, esters, ethers, and ketones.

The chemical stability of PLASKOLITE SAN depends on many factors such as the concentration of the chemical agents, internal stresses and exposure temperature.

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 SAN in a chemical-free environment. Stresses can be created during fabrication, forming and also by improper installation. Sheets or partial sheets with internal stresses from re-working (for example cold bending) can form stress cracks even from exposure to materials to which SAN is usually resistant.

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GENERAL GUIDELINES

STORAGE

PLASKOLITE SAN 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 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

Both surfaces of PLASKOLITE SAN sheets are protected by a fully recyclable polyethylene (PE) film. Keep this film on the sheet as long as possible and remove it immediately after installation.

CLEANING & MAINTENANCE

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

For general purpose cleaning, SAN should be washed with clean, cold water to which a small amount of mild detergent has been added. The use of industrial solvents 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

PLASKOLITE SAN 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.

PLASKOLITE SAN sheets can be recycled by mechanical regrinding.

RE-WORKING

- HANDLING:

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

  For details please contact PLASKOLITE Technical Support.

PLASKOLITE

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