

STORMCLAD Performance Standard



Introduction

STORMCLAD is a UV stabilized flat solid PVC sheet. Easily formed and fabricated. STORMCLAD is ideal for a wide variety of applications. STORMCLAD makes an excellent printing substrate for the advertising and signage industries and is suitable for digital or traditional printing. With its high chemical resistance, STORMCLAD is highly suitable for industrial applications. Suitable for use in the food industry.

Main Benefits

- Excellent chemical resistance, for chemical and corrosive environments
- Impact resistant
- Easily fabricated and formed
- Highest fire rating, self-extinguishing
- High electrical and thermal insulation
- High impact strength
- Weather resistant
- Comply with international standards
- Easy fabrication
- Non toxic

Typical Applications

- Frequently cleaned cladding
- Advertising and signage
- Chemical process industries
- Signage in chemical environments
- Laboratories
- Clinics and hospitals
- Food industry

Resistance to Chemicals

Excellent resistance to... Mineral acids, alkalis, plating solutions, paper making chemicals, pickling solutions, other inorganic solutions and fumes thereof.

Good resistance to... Alcohols, aliphatic hydrocarbons, glycols, amines, phenols.

Not recommended to contact... ketones, chlorinated solvents, aromatic hydrocarbons, some esters and ethers.

Flammability

STORMCLAD is self-extinguishing and complies with the most demanding international fire resistance standards defined in the field of plastics, as shown in the attached table.

Standard	Classification*
DIN 4102	B-1
BS 476/7	Class 1
NSP 92501,5	M-1
CSE RF 3/77	Class 1
UL 94	V-0
ASTM D-635	SE

* Depends on thickness

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Typical Physical Properties

Property	Method*	Conditions	Units	Value
Density	D-792		g/cm ³	1.4
Heat Deflection Temperature (H.D.T)	D-648	Load 1.82 MP	°C	65-68
Service Temperature Range			°C	-10 to +50
Thermal conductivity	C-177		W/m K	0.15
Coefficient of thermal linear expansion	D-696		cm/cm °C	6.7 x 10 ⁻⁵
Rockwell hardness	D-785		R scale	97R
Tensile strength at yield	D-638	10 mm/min	MPa	52
Tensile strength at break	D-638	10 mm/min	MPa	50
Elongation at yield	D-638	10 mm/min	%	3
Elongation at break	D-638	10 mm/min	%	140
Tensile modulus of elasticity	D-638	1 mm/min	MPa	2 900
Flexural strength	D-790	1.3 mm/min	MPa	80
Flexural modulus	D-790	1.3 mm/min	MPa	2 700
Impact falling weight	ISO 6603/1 E50	3 mm sheet	J	95

*ASTM except where noted otherwise

Fabrication Tips

STORMCLAD can be easily fabricated using various techniques. Below are general recommendations for some of them.

Sawing	Machining	Thermoforming	Drilling	Bonding	Welding
For both band and circular saws use blades with a minimum tooth set, and about 8 to 10 teeth per inch. Prevent overheating by feeding slowly.	Use low machining speeds for turning and shaping, and assure free removal of machining chips.	Between 130°C and 170°C STORMCLAD sheets become formable and can then be formed, press molded or blow formed.	Use conventional drills, but be certain to remove free drill chips in order to avoid overheating of the sheet. Also use slow rate of penetration.	STORMCLAD sheets can be bonded with conventional solvent based PVC adhesives.	STORMCLAD extruded PVC sheets can be welded by hot-air welding process conventionally used for PVC.

