



DuPont Powder Coatings

DuPont Polymer Powders Switzerland Sàrl
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Data Sheet

Abcite® X45

A DuPont powder coating resin

Product

Abcite® X45 is a tough chip-resistant thermoplastic powder coating that provides excellent corrosion and UV protection without the need for a primer. It is designed for fluidised bed and hot flocking applications.

Abcite® X45 are based on an ethylene acid copolymer resin.

Chemical Resistance

Abcite® X45 has excellent resistance to chemical attack by both acids and alkalis.

However, it has poor chemical resistance to solvents. Application-specific chemical resistance testing is recommended. Further detailed chemical resistance information may be obtained from DuPont.

Typical applications

Abcite® X45 is particularly suitable for outdoor, light poles, signs posts, street and garden furniture, balustrades, railings and trellis of stairways, fencing panels, supports for climbing plants, bike racks, water transportation.

For more information's, see DuPont guidelines for Metal Coating procedures.

Characteristics

Powder properties	ASTM Standard	Unit	Value
Specific Gravity (Natural)	D792	g/cm ³	0.94
Particle Size Distribution	-	µm	< 125
Bulk density (Natural)	D1895 (test 89)	g/cm ³	0.39
Bulk density (White)	D1895 (test 89)	g/cm ³	0.41
Coating properties			
Impact Strength: 23°C/-40°C	D1822	kJ/m ²	607/342
Abrasion Resistance	D1630	NBS Index	47
Abrasion Resistance (Taber)**	D4060	mg wt loss	38 mg/1000 cycles
Salt Spray Resistance Subsurface corrosion of scribed panel	B117-73 (5% common salt in water at 35°C)	mm	< 2 at 2000 hrs
Condensation resistance Subsurface corrosion of scribed panel	DIN 50017-KK (40°C, 100% rel. hum.)	mm	< 2 at 1000 hrs
Weathering, 2000 hr Exposure Gloss, 20°*	G53	% Gloss Reduction	< 20 %
Burning Behaviour Flammability	UL94 D635	mm/min	VO 15.8
Electrical / Mechanical / Thermal Properties			
Hardness	D2240	Shore D	46
Elongation at Break E _B	D638	%	430
Tensile Strength	D638	MPa	21
Melting Point	D3418	°C	92
Vicat Softening Point	D1525	°C	58
Melt Flow Index (MFI) (190°C/2.16 kg)	D1238	g/10 min	60
Brittleness temperature	D 746	°C	-60
Thermal conductivity	E1530	W/mK	0.24
Dielectric strength E _d	D149	KV/mm	38
Volumetric resistivity	D257	Ohm/cm	4.6 x 10 ¹¹

* **Abcite® X0545**

** 3.175 mm thick compression moulded sample, wheel = CS-10, wt = 1000 grams.

Test Conditions: tests were performed using ST 37 steel panels coated by the fluidised bed process (thickness of 400-600 µm) or film samples. Unless otherwise stated, all data relates to **Abcite® X0545**. The results may vary for other colours or thickness.

For Safety, Health, storage and handling recommendations as well as the disclaimer information, see the DuPont Metal Coating summary guidelines.