

BASF Styrodur® 4000 CS Extruded Rigid Polystyrene Foam (Europe)

Category : Polymer , Thermoplastic , Polystyrene (PS) , Expanded Polystyrene (EPS) , Polystyrene, Extrusion Grade

Material Notes:

Description: Styrodur C is the green extruded rigid polystyrene foam (XPS) from BASF. As a thermal insulation, it makes a significant contribution to climate protection by reducing CO2 emissions. The key features of Styrodur C are high compressive strength, low water absorption, and outstanding thermal insulation. It is also rot-proof and easy to handle on site. Compressive strength is the major factor that differentiates the various grades of Styrodur C. Applications: Load-bearing floor slabs, Load-bearing floors, Perimeter floor slabs, Perimeter basement walls, Perimeter subsoil water areas, Inverted flat roofs, Duo roofs, Plus roofs, Parking decks, Promenade roofs, Roof gardens, Conventional flat roofs, Warehouses, Roads and railways, and Ice rinks. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Styrodur-4000-CS-Extruded-Rigid-Polystyrene-Foam-Europe.php

Physical Properties	Metric	English	Comments
Density	0.0350 g/cc	0.00126 lb/in ³	
Water Absorption	0.20 %	0.20 %	by immersion; DIN EN 12087
	<= 3.0 %	<= 3.0 %	by diffusion; DIN EN 12088
Water Vapor Transmission	80.0 - 150 g/m ² /day	5.15 - 9.66 g/100 in ² /day	DIN EN 12086
Deformation	<= 5.0 % @Pressure 0.0400 MPa, Temperature 70.0 °C	<= 5.0 % @Pressure 5.80 psi, Temperature 158 °F	DIN EN 1605

Mechanical Properties	Metric	English	Comments
Tensile Strength	0.400 MPa	58.0 psi	
Creep Strength	0.180 MPa @Strain <=2.00 %	26.1 psi @Strain <=2.00 %	Compressive; DIN EN 1606
	0.180 MPa @Strain <=2.00 %	26.1 psi @Strain <=2.00 %	Compressive; long-term; 50 years; DIN EN 1606
	0.240 MPa @Strain <=2.00 %, Time 3.60e+6 sec	34.8 psi @Strain <=2.00 %, Time 1000 hour	Compressive; mid-term; DIN EN 1606
Modulus of Elasticity	0.00900 GPa	1.31 ksi	Long-term; DIN EN 826
	0.0300 GPa	4.35 ksi	DIN EN 826
Tensile Modulus	0.0300 GPa	4.35 ksi	

Mechanical Properties	Metric	English	Comments
Compressive Strength	0.180 MPa	26.1 psi	s_{perm}; DIBT Z-23.34-13525
	0.255 MPa	37.0 psi	f_{cd}; DIBT Z-23.34-13525
	0.500 MPa @Strain 10.0 %	72.5 psi @Strain 10.0 %	DIN EN 826
Compressive Modulus	0.0100 GPa	1.45 ksi	Elasticity; Long term E50; DIN EN 826
	0.0300 GPa	4.35 ksi	Elasticity; Short term E; DIN EN 826
Shear Strength	0.300 MPa	43.5 psi	
	0.300 MPa	43.5 psi	Allowable
Adhesive Bond Strength	<= 0.100 MPa	<= 14.5 psi	on concrete
	<= 0.100 MPa	<= 14.5 psi	on mineralic surfaces
	<= 0.100 MPa	<= 14.5 psi	on gluing mortar
	<= 0.100 MPa	<= 14.5 psi	on plasters
	>= 0.200 MPa	>= 29.0 psi	on metals
	>= 0.200 MPa	>= 29.0 psi	on wood
	>= 0.200 MPa	>= 29.0 psi	on plastic

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	8.00 µm/m-°C	4.44 µin/in-°F	DIN 53752
CTE, linear, Transverse to Flow	6.00 µm/m-°C	3.33 µin/in-°F	DIN 53752
Thermal Conductivity	0.0330 W/m-K	0.229 BTU-in/hr-ft²-°F	Moisture Content: 0%
	0.0340 W/m-K	0.236 BTU-in/hr-ft²-°F	Moisture Content: 1%
	0.0340 W/m-K	0.236 BTU-in/hr-ft²-°F	Moisture Content: 2%
	0.0350 W/m-K	0.243 BTU-in/hr-ft²-°F	Moisture Content: 3%
	0.0350 W/m-K	0.243 BTU-in/hr-ft²-°F	Moisture Content: 4%
	0.0360 W/m-K	0.250 BTU-in/hr-ft²-°F	Moisture Content: 5%
	0.0370 W/m-K	0.257 BTU-in/hr-ft²-°F	Moisture Content: 6%
	0.0380 W/m-K	0.264 BTU-in/hr-ft²-°F	Moisture Content: 8%

Thermal Properties	0.0390 W/m-K Metric	0.271 BTU-in/hr-ft ² -°F English	Moisture Content: 10% Comments
	0.0400 W/m-K	0.278 BTU-in/hr-ft ² -°F	Moisture Content: 12%
	0.0240 W/m-K @Temperature -80.0 °C	0.167 BTU-in/hr-ft ² -°F @Temperature -112 °F	
	0.0260 W/m-K @Temperature -60.0 °C	0.180 BTU-in/hr-ft ² -°F @Temperature -76.0 °F	
	0.0280 W/m-K @Temperature -40.0 °C	0.194 BTU-in/hr-ft ² -°F @Temperature -40.0 °F	
	0.0300 W/m-K @Temperature -20.0 °C	0.208 BTU-in/hr-ft ² -°F @Temperature -4.00 °F	
	0.0320 W/m-K @Temperature 0.000 °C	0.222 BTU-in/hr-ft ² -°F @Temperature 32.0 °F	
	0.0330 W/m-K @Temperature 10.0 °C	0.229 BTU-in/hr-ft ² -°F @Temperature 50.0 °F	
	0.0340 W/m-K @Temperature 20.0 °C	0.236 BTU-in/hr-ft ² -°F @Temperature 68.0 °F	
	0.0350 W/m-K @Temperature 30.0 °C	0.243 BTU-in/hr-ft ² -°F @Temperature 86.0 °F	
	0.0360 W/m-K @Temperature 40.0 °C	0.250 BTU-in/hr-ft ² -°F @Temperature 104 °F	
	0.0370 W/m-K @Temperature 50.0 °C	0.257 BTU-in/hr-ft ² -°F @Temperature 122 °F	
	0.0310 W/m-K @Thickness 30.0 mm	0.215 BTU-in/hr-ft ² -°F @Thickness 1.18 in	DIN EN 13164
	0.0320 W/m-K @Thickness 40.0 mm	0.222 BTU-in/hr-ft ² -°F @Thickness 1.57 in	DIN EN 13164
	0.0330 W/m-K @Thickness 50.0 mm	0.229 BTU-in/hr-ft ² -°F @Thickness 1.97 in	DIN EN 13164
	0.0340 W/m-K @Thickness 60.0 mm	0.236 BTU-in/hr-ft ² -°F @Thickness 2.36 in	DIN EN 13164
	0.0350 W/m-K	0.243 BTU-in/hr-ft ² -°F	

Thermal Properties	Metric @ Thickness 80.0 mm	English @ Thickness 3.15 in	DIN EN 13164 Comments
	0.0370 W/m-K	0.257 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 100 mm	@Thickness 3.94 in	
	0.0380 W/m-K	0.264 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 120 mm	@Thickness 4.72 in	
	0.0380 W/m-K	0.264 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 140 mm	@Thickness 5.51 in	
Maximum Service Temperature, Air	75.0 °C	167 °F	DIN EN 14706

Descriptive Properties	Value	Comments
Commercial Status	Europe	
Dimensional Stability at Heat	< 5%	70°C, 90% rh; DIN EN 1604
Dynamic Stiffness	120-800 MN/m ³	
Freeze-Thaw-Resistance	<1%	DIN EN1209
Long-term Bedding Modulus for 30-160 mm	0.05 - 0.3 N/mm ³	EN 1606

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China