

BASF Styrodur® 3035 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, Domestic floors, Load-bearing floors, Perimeter floor slabs, Perimeter basement walls, Perimeter subsoil water areas, Cavity walls, Pitched roofs, Ceilings, and Warehouses Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Styrodur-3035-CS-Extruded-Rigid-Polystyrene-Foam-Europe.php

Physical Properties	Metric	English	Comments
Density	0.0330 g/cc	0.00119 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	50.0 - 150 g/m ² /day	3.22 - 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	0.300 MPa	43.5 psi	
Creep Strength	0.130 MPa @Strain <=2.00 %	18.9 psi @Strain <=2.00 %	Compressive; DIN EN 1606
	0.130 MPa @Strain <=2.00 %	18.9 psi @Strain <=2.00 %	Compressive; long-term; 50 years; DIN EN 1606
	0.160 MPa @Strain <=2.00 %, Time 3.60e+6 sec	23.2 psi @Strain <=2.00 %, Time 1000 hour	Compressive; mid-term; DIN EN 1606
Modulus of Elasticity	0.00650 GPa	0.943 ksi	Long-term; DIN EN 826
	0.0200 GPa	2.90 ksi	DIN EN 826
Tensile Modulus	0.0200 GPa	2.90 ksi	

Mechanical Properties	Metric	English	Comments
Compressive Strength	0.130 MPa	18.9 psi	s_{perm}; DIBT Z-23.34-13525
	0.180 MPa	26.1 psi	f_{cd}; DIBT Z-23.34-13525
	0.300 MPa @Strain 10.0 %	43.5 psi @Strain 10.0 %	DIN EN 826
Compressive Modulus	0.00500 GPa	0.725 ksi	Elasticity; Long term E50; DIN EN 826
	0.0200 GPa	2.90 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	
	0.0380 W/m-K	0.264 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 160 mm	@Thickness 6.30 in	
	0.0400 W/m-K	0.278 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 180 mm	@Thickness 7.09 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	
	130 MN/mm ²	120 mm
	150 MN/mm ²	100 mm
	190 MN/mm ²	80 mm
	260 MN/mm ²	60 mm
	390 MN/mm ²	40 mm
	780 MN/mm ²	20 mm
Freeze-Thaw-Resistance	<1%	DIN EN1209
Long-term Bedding Modulus for 30-160 mm	0.036 - 0.217 N/mm ³	EN 1606

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