

BASF Styrodur® 2500 C 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: Domestic floors, Cavity walls, Conventional flat roofs, Parapet walls, Pitched roofs, Sandwich panels, and Warehouses Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Styrodur-2500-C-Extruded-Rigid-Polystyrene-Foam-Europe.php

Physical Properties	Metric	English	Comments
Density	0.0280 g/cc	0.00101 lb/in ³	DIN EN 1602
Water Absorption	0.20 %	0.20 %	by immersion; DIN EN 12087
	<= 3.0 %	<= 3.0 %	by diffusion; DIN EN 12088
Water Vapor Transmission	100 - 200 g/m ² /day	6.44 - 12.9 g/100 in ² /day	DIN EN 12086
Deformation	<= 5.0 %	<= 5.0 %	DIN EN 1605
	@Pressure 0.0400 MPa, Temperature 70.0 °C	@Pressure 5.80 psi, Temperature 158 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength	0.150 MPa	21.8 psi	
Creep Strength	0.0600 MPa	8.70 psi	Compressive; long-term; 50 years; DIN EN 1606
	@Strain <=2.00 %	@Strain <=2.00 %	
	0.0800 MPa	11.6 psi	Compressive; DIN EN 1606
	@Strain <=2.00 %	@Strain <=2.00 %	
	0.100 MPa	14.5 psi	Compressive; mid-term; DIN EN 1606
	@Strain <=2.00 %, Time 3.60e+6 sec	@Strain <=2.00 %, Time 1000 hour	
Modulus of Elasticity	0.0150 GPa	2.18 ksi	DIN EN 826
Tensile Modulus	0.0150 GPa	2.18 ksi	
Flexural Strength	0.500 MPa	72.5 psi	
	0.150 - 0.200 MPa	21.8 - 29.0 psi	

Compressive Strength Mechanical Properties	Metric @ Strain 10.0 %	English @ Strain 10.0 %	DIN EN 826 Comments
Compressive Modulus	0.0100 GPa	1.45 ksi	Elasticity; Short term E; DIN EN 826
Shear Strength	0.200 MPa	29.0 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 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	4.44 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	DIN 53752
CTE, linear, Transverse to Flow	6.00 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	3.33 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	DIN 53752
Thermal Conductivity	0.0330 W/m-K	0.229 BTU-in/hr-ft ² -°F	Moisture Content: 0%
	0.0340 W/m-K	0.236 BTU-in/hr-ft ² -°F	Moisture Content: 1%
	0.0340 W/m-K	0.236 BTU-in/hr-ft ² -°F	Moisture Content: 2%
	0.0350 W/m-K	0.243 BTU-in/hr-ft ² -°F	Moisture Content: 3%
	0.0350 W/m-K	0.243 BTU-in/hr-ft ² -°F	Moisture Content: 4%
	0.0360 W/m-K	0.250 BTU-in/hr-ft ² -°F	Moisture Content: 5%
	0.0370 W/m-K	0.257 BTU-in/hr-ft ² -°F	Moisture Content: 6%
	0.0380 W/m-K	0.264 BTU-in/hr-ft ² -°F	Moisture Content: 8%
	0.0390 W/m-K	0.271 BTU-in/hr-ft ² -°F	Moisture Content: 10%
	0.0400 W/m-K	0.278 BTU-in/hr-ft ² -°F	Moisture Content: 12%
	0.0240 W/m-K	0.167 BTU-in/hr-ft ² -°F	
	@ Temperature -80.0 °C	@ Temperature -112 °F	
	0.0260 W/m-K	0.180 BTU-in/hr-ft ² -°F	

Thermal Properties	@Temperature -60.0 °C Metric	@Temperature -76.0 °F English	Comments
	0.0280 W/m-K	0.194 BTU-in/hr-ft ² -°F	
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.0300 W/m-K	0.208 BTU-in/hr-ft ² -°F	
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	0.0320 W/m-K	0.222 BTU-in/hr-ft ² -°F	
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	0.0330 W/m-K	0.229 BTU-in/hr-ft ² -°F	
	@Temperature 10.0 °C	@Temperature 50.0 °F	
	0.0340 W/m-K	0.236 BTU-in/hr-ft ² -°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	0.0350 W/m-K	0.243 BTU-in/hr-ft ² -°F	
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	0.0360 W/m-K	0.250 BTU-in/hr-ft ² -°F	
	@Temperature 40.0 °C	@Temperature 104 °F	
	0.0370 W/m-K	0.257 BTU-in/hr-ft ² -°F	
	@Temperature 50.0 °C	@Temperature 122 °F	
	0.0300 W/m-K	0.208 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 20.0 mm	@Thickness 0.787 in	
	0.0310 W/m-K	0.215 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 30.0 mm	@Thickness 1.18 in	
	0.0320 W/m-K	0.222 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 40.0 mm	@Thickness 1.57 in	
	0.0330 W/m-K	0.229 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 50.0 mm	@Thickness 1.97 in	
	0.0340 W/m-K	0.236 BTU-in/hr-ft ² -°F	DIN EN 13164
	@Thickness 60.0 mm	@Thickness 2.36 in	
Maximum Service Temperature, Air	75.0 °C	167 °F	DIN EN 14706

Descriptive Properties	Value	Comments
Commercial Status	Europe	

Dimensional Stability at Heat Descriptive Properties	< 5% Value	70°C, 90% rh; DIN EN 1604 Comments
Dynamic Stiffness	120-800 MN/m ³	
Freeze-Thaw-Resistance	<1%	DIN EN1209

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