CORAFOAM® PB 50 M1 HC

Rev. N° 4 - Date 01/08/2020

Description

Polyisocyanurate rigid foam	
Blowing agents:	HFCs/CFCs/HCFCs-free
Ozone Depletion Potential (ODP):	0
Global warming potential (GWP):	<10
Approvals, Homologations, Compliances	ASTM C591 Type III Grade 2. IMO FTP CODE Part 2 Annex 1 (Smoke density and Smoke Toxicity)

Typical characteristics

Nominal density	ASTM D1622/EN 1602/EN ISO 845	lb/ft^3 (kg/m^3)	3.12 (50)
Compressive strength – Parallel (74°F/23°C)	ASTM D1621/EN 826	psi (MPa)	60.92 (0,420)
Compressive strength - Perpendicular (weakest direction), (74°F/23°C)	ASTM D1621/EN 826	psi (MPa)	43.51 (0,300)
Compressive strength – Parallel (-265°F/-165°C)	ASTM D1621/EN 826	psi (MPa)	72.52 (0,500)
Compressive strength - Perpendicular (weakest direction), (-265°F/-165°C)	ASTM D1621/EN 826	psi (MPa)	65.27 (0,450)
Tensile strength - Parallel (74°F/23°C)	ASTM D1623-A/EN 1607	psi (MPa)	72.52 (0,500)
Tensile strength - Perpendicular (weakest direction), (74°F/23°C)	ASTM D1623-A/EN 1607	psi (MPa)	65.27 (0,450)
Tensile strength - Parallel (-265°F/-165°C)	ASTM D1623-A/EN 1607	psi (MPa)	68.16 (0,470)
Tensile strength - Perpendicular (weakest direction), (-265°F/-165°C)	ASTM D1623-A/EN 1607	psi (MPa)	60.92 (0,420)
Tensile E-modulus (all directions), (-265°F/-165°C)	ASTM D1623-A/EN 1607	psi (MPa)	<797.70 (<5,5)
Shear strength - Perpendicular (weakest direction), (74°F/23°C)	ASTM C273/EN 12090	psi (MPa)	34.80 (0,240)
Thermal conductivity - Initial (50°F/10°C)	ASTM C518/ASTM C177/EN 12667	BTU·in/hr·ft^2·°F (mW/mK)	0.14 (20,9)
Thermal conductivity - 180 days (10°C) (25 mm thickness sample aged 180 days at 23°C, 50% R.H.)	ASTM C518/ASTM C177/EN 12667	BTU·in/hr·ft^2·°F (mW/mK)	0.18 (25,8)
Coefficient of thermal stress resistance CTSR (-265°F/74°F, -165°C/+23°C)	CINI 2.7.01		>4.0
Poisson's Ratio (-265°F/-165°C)	ASTM D1623/EN 1607		0.4
Coefficient of linear thermal expansion CTE (-321°F/ +74°F,-196°C/+23°C)	ASTM D696/EN 13471	1/°F·10E-6 (1/K·10E-6)	<50
Fire reaction	NF 92-501	Class	M1
Fire reaction	DIN 4102	Class	B2
Fire reaction (maximum extent of burnt length)	EN ISO 3582	inches (mm)	≤0.39 (≤10)
Fire reaction (extinguishing time)	EN ISO 3582	s	≤10

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Surface burning characteristics	ASTM E84	FSI	<25
Surface burning characteristics	ASTM E84	Smoke Dev.	195
Fire reaction	ASTM D3014	%	Ret.>90
Fire reaction	UL 94-Horizontal Burning	Class	HBF
Fire reaction (blocks, sheets)	EN 13501/EN ISO 11925	Euroclass	E
Fire reaction (pipe thickness ≤25 mm)	EN 13501/EN ISO 11925	Euroclass	DL-s2-d0
Fire reaction (pipe thickness ≥75 mm)	EN 13501/EN ISO 11925	Euroclass	CL-s1-d0
Leachable chlorides	ASTM C871/EN 13468	ppm	<60
pH	ASTM C871/EN 13468		6.0-7.0
Dimensional stability, linear change (48h,-40°F/-40°C,amb.R.H.)	ASTM D2126/EN 1604	%	≤1.0
Dimensional stability, linear change (48h,+212°F/ +100°C,amb.R.H.)	ASTM D2126/EN 1604	%	≤1.5
Dimensional stability, linear change (48h,+158°F/+70°C, 97% R.H.)	ASTM D2126/EN 1604	%	≤2.0
Water vapour transmission rate (74°F/23°C, 50% R.H.)	ASTM E96/EN 12086	grains/h·ft^2 (g/h·m^2)	<0.8
Water vapor permeability (74°F/23°C,50% R.H.)	ASTM E96/EN 12086	Perm-inch (ng/s·m·Pa)	<3.0 (<4,4)
Water absorption by volume	ASTM C272	%	<1.0
Water absorption by volume	ASTM D2842/EN 12087/ISO 2896	%	<3.0
Operating temperature		°F (°C)	-368/+248 (-200/+120)
Maximum service temperature	ASTM C591	°F (°C)	+300 (+149)
Maximum service temperature	EN 14706	°F (°C)	+266 (+130)
Closed-cell content	ASTM D6226/EN ISO 4590	%	>95
Hot-Surface Performance (300°F/149°C)	ASTM C411		Pass

Handling notice

Terms "parallel" and "perpendicular" are referred to slab/specimen/block thickness direction.

In some applications polyurethane may present fire risks, e.g. if exposed to fire or to excessive heat in presence of oxygen or air, including when welding or cutting with torches.

It is the Customer's responsibility to determine if product described herein is appropriate for Customer's purposes and end-use and to ensure that working place, storage and disposal practices are in compliance with any applicable law.

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Remarks

For usage information, personal protective equipment, transport, storage and disposal of waste it is essential to refer to the Material Safety Data Sheets.

Values shown are determined from laboratory tests and obtained under controlled conditions; they outline typical characteristics and they do not constitute anyhow a sales specification; they are based on DUNA-USA's current knowledge and experience of the products when properly stored, handled and applied in accordance with our recommendations.
This Technical Data Sheet cancels and replaces any other previous issue.

DUNA-USA does not any accept responsibility for incorrect use of its products as it cannot ensure the correct methods of application have been followed; we therefore specifically disclaim any liability for consequential or incidental damages of any kind, including lost profits.
DUNA-USA reserves the right to change the data in this information sheet without any prior notice.