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# CORAFOAM® U 310

Rev. N° 13 - Date 04/09/2018

## Description

Polyurethane rigid foam PUR

Blowing agents:	HFCs/CFCs/HCFCs-free
Ozone Depletion Potential (ODP):	0
Global warming potential (GWP):	<10

## Typical characteristics

Color			Brown
Nominal density	ASTM D1622/EN 1602/EN ISO 845	lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	31 (490)
Compressive strength – Parallel (74°F/23°C)	ASTM D1621/EN 826	psi (MPa)	2379 (16,4)
Compressive strength - Perpendicular (weakest direction), (74°F/23°C)	ASTM D1621/EN 826	psi (MPa)	2321 (16)
Compressive modulus - Parallel (74°F/23°C)	ASTM D1621/EN 826	psi (MPa)	63816 (440)
Compressive modulus - Perpendicular (weakest direction),(74°F/23°C)	ASTM D1621/EN 826	psi (MPa)	54389 (375)
Compressive strength – Parallel (-265°F/-165°C)	ASTM D1621/EN 826	psi (MPa)	6816 (47)
Compressive strength - Perpendicular (weakest direction), (-265°F/-165°C)	ASTM D1621/EN 826	psi (MPa)	6816 (47)
Flexural strength - Parallel, Met.I (74°F/23°C)	ASTM C203/EN 12089	psi (MPa)	3263 (22,5)
Flexural modulus - Parallel (74°F/23°C)	ASTM C203/EN 12089	psi (MPa)	89923 (620)
Max. flexural strain, Met.I (74°F/23°C)	ASTM C203/EN 12089	Length/length	0.060
Heat distortion temperature, Met.A	ASTM D648/EN ISO 75	°F (°C)	136-145 (58-63)
Tensile strength - Parallel (74°F/23°C)	ASTM D1623-A/EN 1607	psi (MPa)	1653 (11.4)
Tensile strength - Perpendicular (weakest direction), (74°F/23°C)	ASTM D1623-A/EN 1607	psi (MPa)	1624 (11.2)
Tensile E-modulus (all directions), (-265°F/-165°C)	ASTM D1623-A/EN 1607	psi (MPa)	15954 (110)
Thermal conductivity - Initial (50°F/10°C)	ASTM C518/ASTM C177/EN 12667	BTU-in/hr-ft <sup>2</sup> ·°F (mW/mK)	0.50 (72,0)
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 <sup>2</sup> ·°F (mW/mK)	0.51 (74,0)
Coefficient of thermal stress resistance CTSR (-265°F/74°F, -165°C/+23°C)	CINI 2.7.01		>5
Poisson's Ratio (-265°F/-165°C)	ASTM D1623/EN 1607		0.40
Poisson's Ratio (73°F/23°C)	ASTM D1623/EN 1607		0.55-0.60
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)	25.0 (45)

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Coefficient of linear thermal expansion CTE (+70/+120°F/ +21/+48°C)	ASTM D696/EN 13471	1/°F-10E-6 (1/K-10E-6)	27.8 (50)
Fire reaction	DIN 4102	Class	B3
Leachable chlorides	ASTM C871/EN 13468	ppm	<60
Dimensional stability (48h,-13°F/-25°C) - Length/Width - Thickness	ASTM D2126/EN 1604	%	±0.5 ±0.5
Dimensional stability (48h, 131°F/55°C,amb.R.H.) - Length/Width - Thickness	ASTM D2126/EN 1604	%	±0.5 ±0.5
Dimensional stability (48h,158°F/70°C, Amb. R.H.) - Length/Width - Thickness	ASTM D2126/EN 1604	%	±0.5 ±0.5
Water absorption by volume	ASTM D2842/EN 12087/ISO 2896	%	<0.4
Hardness	ASTM D2240/EN ISO 868	Shore D	52
Operating temperature		°F (°C)	-328/+176 (-200/+80)
R-Value - 180 days, 1 inch (75°F/24°C)	ASTM C518/EN 12667	hr·ft <sup>2</sup> ·°F/BTU	2.00
Closed-cell content	ASTM D6226/EN ISO 4590	%	>95

### 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.

### 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 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.

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