DUNAPOL® C 096 L

Rev. N° 2 - Date 06/05/2019

Description

Two-component polyurethane system suitable to obtain a rigid foam
Blowing agents CO2
Ozone depletion potential: 0

Typical characteristics - Polyol

Component			Polyol
Name			DUNAPOL® C 096 L
Density (77°F, 25°C)	ASTM D891	lb/ft³ (g/l)	67.1 (1075)
Viscosity (77°F, 25°C)	ASTM D2196	P (mPa s)	6 (600)
Storage temperature		°F (°C)	50-95 (10-35)
Shelf Life		Months	6
Appearance			Light yellow liquid

Typical characteristics - Isocyanate

Component			Isocyanate
Name			DUNAPOL® A 310
Density (77°F, 25°C)	ASTM D891	lb/ft³ (g/l)	74.9-77.4 (1200-1240)
Viscosity (77°F, 25°C)	ASTM D2196	P (mPa s)	1.8-2.6 (180-260)
Storage temperature		°F (°C)	50-95 (10-35)
Shelf Life		Months	6
Appearance			Brown liquid

Mixing Ratio

Mixing ratio by weight POL/ISO		parts	100/100

Typical characteristics of reaction

Components temperature		°F (°C)	70 (21)
Cream time		h min' sec"	40"±5”
Gel time		h min' sec"	5’40”±20”
Free rise density	ASTM D1622/EN 1602	lb/ft³ (kg/m³)	4.7-5.0 (75-80)

Characteristics of the polymer (int. procedure DU/25)

Applied density	ASTM D1622/EN 1602	lb/ft³ (kg/m³)	6.2 (100)
Minimal core density	ASTM D1622/EN 1602	lb/ft³ (kg/m³)	>5.6 (>90)
Compression strength (70°F/21°C) - average	ASTM D1621/EN 826	lb/in² (kPa)	119 (820)
Compression strength (-265°F/-165°C) - average	ASTM D1621/EN 826	lb/in² (kPa)	319 (2200)
Tensile strength (73°C/23°C)	ASTM D1623-A/EN 1607	lb/in² (kPa)	160 (1100)
Tensile strength (-265°F/-165°C)	ASTM D1623-A/EN 1607	lb/in² (kPa)	160 (1100)
Closed cells	ASTM D6226/EN ISO 4590	%	>95
Thermal conductivity - Initial (50°F/10°C)	ASTM C518, C177/EN 12667	BTU·in/hr· ft²·°F (W/mK)	0.19 (0,028)
Thermal conductivity – 180 days (50°F/10°C)	ASTM C518/EN 12667	BTU·in/hr· ft²·°F (W/mK)	0.25 (0,036)
(1” thickness sample, aged 180 days at 73°F, 50% R.H.)			
Fire reaction	ISO 3582	inches (mm)	1.18 (<30)
Fire reaction	ISO 3582	s	<120
Fire reaction	DIN 4102	Class	B3
Fire reaction	UL 94	Class	HBF
Fire reaction	EN 13501/EN ISO 11925	Euroclass	F

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Coefficient of linear thermal expansion CTE (-196°C/+23°C, -321°F/+73°F)	ASTM D696/EN 13471	1/°F·10-6 (1/K·10-6)	27.8 (50)
Coefficient of thermal stress resistance CTSR (-165°C/+23°C, -275°F/+73°F)	CINI 2.7.01		4.5
Operating temperature		°F (°C)	-328/+212 (-200/+100)
Leachable chlorides	ASTM C871	ppm	<60
pH	ASTM C871/EN 13468		6-7
Shrinkage after demolding		%	±1
Water absorption by volume	ASTM D2842/ISO 2896/EN 12087	%	1.0
Water vapour transmission rate (23°C/73°F, 50% R.H.)	ASTM E96/EN 12086	grains/h·ft² (g/m²·h)	1.144 (0.8)

Handling notice

In order to obtain the best results, thermostatic conditioning of components is essential.
Wherever possible apply products in ventilated areas, wearing gloves, protective eyewear, barrier creams and suitable protective clothes. Avoid contact with unhardened materials.
In case of accidental contact with the skin, wash with lukewarm water and soap for at least 10 minutes. Do not wash affected areas with solvents as this may increase contamination.
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.
Lifetime of products refers to materials stored in sealed containers in dry rooms, at recommended temperatures and protected from direct sunlight.
The expiry date is printed on the packaging.
Data coming from tests performed in laboratory, with components at the indicated temperature; manual mixing with a mechanical mixer at 1500-2500 rpm, in free rise in box/glass or in closed mold at the suggested temperature. 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 comply 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 Inc. 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 Inc. reserves the right to change the data in this information sheet without any prior notice.

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