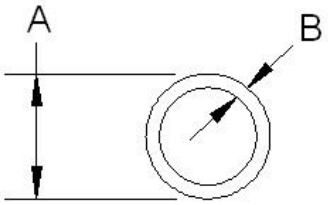
Unlimited Polymer Solutions

PRODUCT SUBMITTAL 102

Product: **RAUPEX® O_2 Barrier Pipe, SDR9**
Date: **31 July 2019 (supersedes 21 January 2019)**



Article No.	Nominal Size in	Average OD A in (mm)	Minimum Wall Thickness B In (mm)	Weight lb/ft (kg/m)	Capacity gal/ft (l/m)
136008	3/8	0.500 (12.70)	0.070 (1.78)	0.05 (0.07)	0.0050 (0.0624)
136031	1/2	0.625 (15.88)	0.070 (1.78)	0.06 (0.08)	0.0098 (0.1222)
136880	5/8	0.750 (19.05)	0.083 (2.12)	0.08 (0.11)	0.0134 (0.1671)
136051	3/4	0.875 (22.22)	0.097 (2.47)	0.10 (0.15)	0.0189 (0.2356)
136011	1	1.125 (28.58)	0.125 (3.18)	0.17 (0.26)	0.0316 (0.3939)
136283	1 1/4	1.375 (34.92)	0.153 (3.88)	0.25 (0.37)	0.0467 (0.5827)
136293	1 1/2	1.625 (41.28)	0.181 (4.59)	0.35 (0.52)	0.0650 (0.8118)
136303	2	2.125 (53.98)	0.236 (6.00)	0.60 (0.90)	0.1114 (1.3906)

TECHNICAL DESCRIPTION

Specification	English	SI	Standard
Minimum Density	58 lb/ft³	926 kg/m³	ASTM F876
Min. Degree of of Crosslinking	70%	70%	ASTM F876
Max. Thermal Conductivity	2.84 Btu in./(ft²°F hr)	0.41 W/(m°K)	DIN 16892
Coefficient of Linear Expansion	9.33X10-4 in/ft°F @ 68°F 1.33x10-3 in/ft°F @ 212°F	0.14 mm/(m°C) @ 20°C 0.2 mm/(m°C) @ 100°C	Mean @ 20-70°C per DIN 16892
IZOD Impact Res.	No Break	No Break	--
Modulus of Elasticity	87,000-130,500 psi @ 68°F 43,500-58,000 psi @ 176°F	600-900 N/mm² @ 20°C 300-400 N/mm² @ 80°C	Minimum @ 20°C per DIN 16892

Specification	English	SI	Standard
Tensile Strength	4194-4355 psi @ 68°F 2610-2900 psi @ 176°F per ASTM D638	26-30 N/mm² @ 20°C 18-20 N/mm² @ 80°C per ASTM D638	--
Roughness	e=0.00028 in	e=0.007 mm	--
Temperature Working Range	-40 to 200°F	-40 to 93°C	--
O_2 Permeability	--	<=0.32 mg/m²/day @ 40°C	DIN 4726
Max. Short-term Exposure	150 psig @ 210°F (48 hr)	1035 kPa @ 99°C (48 hr)	ASTM F876
UV Resistance	See TB218		ASTM F2657

FUNCTIONAL DESCRIPTION

RAUPEX O_2 barrier pipe is manufactured using REHAU's high-pressure peroxide method for crosslinked polyethylene (PEXa). RAUPEX pipe meets or exceeds the requirements of ASTM F876, F877, NSF 61, CSA B137.5 and PPI TR-3. This PEXa pipe is SDR9, red in color, and is specifically designed for use with the EVERLOC+® compression-sleeve system certified to ASTM F877. See *Technical Bulletin TB261* for other compatible PEX fitting systems. RAUPEX O_2 barrier pipe has a co-extruded oxygen diffusion barrier that exceeds the strict requirements of DIN 4726. RAUPEX pipe is manufactured by REHAU using a quality management system which has been certified to the latest version of ISO 9001.

LONG TERM STRENGTH

The maximum temperature and pressure ratings of the RAUPEX pipe are in accordance to ASTM F876, CSA B137.5 and PPI TR-3. The designer shall determine the actual conditions and apply the appropriate and additional design factors as required for any particular project. The temperature and pressure ratings apply to the application of RAUPEX pipe for conveying heating and cooling water at the 2.0 safety factor on allowable working pressure according to ASTM and CSA. According to the REHAU *PEXa Limited Warranty*, the RAUPEX pipe warranty period of 25 years is for operating conditions at or below 180°F (82.2°C) in permitted applications when the handling, use, installation and maintenance continually complies with all REHAU technical guidelines.

RAUPEX SDR9	
maximum pressures and temperatures	**design factors**
160 psi @ 73.4°F (1055 kPa @ 23°C)	0.50 (per ASTM F876, CSA B137.5)
100 psi @ 180°F (690 kPa @ 82.2°C)	0.50 (per ASTM F876, CSA B137.5)
80 psi @ 200°F (550 kPa @ 93.3°C)*	0.50 (per ASTM F876, CSA B137.5)

* REHAU defines Elevated Temperature Applications as those with operating conditions greater than 180°F (82.2°C). When REHAU PEXa pipes are planned to be operated in Elevated Temperature Applications, contact REHAU Engineering to verify your project conditions comply with the REHAU *PEXa Limited Warranty* in accordance to REHAU *Technical Bulletin TB230 Elevated Temperature Applications.*