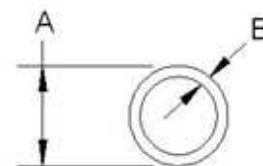
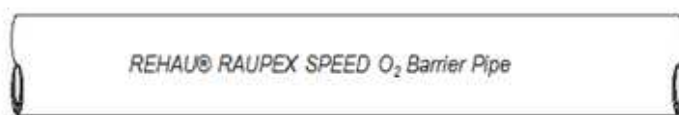


PRODUCT SUBMITTAL 173

Product: **RAUPEX[®] SPEED O₂ Barrier Pipe, SDR9**
Date: **08 March 2016 (supersedes 01 October 2015)**



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)	Bend Radius in (mm)
160950	1/2	0.625 (15.88)	0.070 (1.78)	0.063 (0.093)	0.0098 (0.1222)	3.25 (82.5)

TECHNICAL DESCRIPTION

Specification	English	SI	Standard	Specification	English	SI	Standard
Minimum Density	58 lb/ft ³	926 kg/m ³	ASTM F876	Tensile Strength	4194-4355 psi @ 68°F	26-30 N/mm ² @ 20°C	--
Min. Degree of Crosslinking	70%	70%	ASTM F876		2610-2900 psi @ 176°F per ASTM D638	18-20 N/mm ² @ 80°C per ASTM D638	
Max. Thermal Conductivity	2.84 Btu in./(ft ² °F hr)	0.41 W/(m°C)	DIN 16892	Roughness	e=0.00028 in	e=0.007 mm	--
Coefficient of Linear Expansion	9.33X10 ⁻⁴ in/ft°F @ 68°F	0.14 mm/(m°C) @ 20°C	Mean @ 20 - 70°C per DIN 16892	O ₂ Permeability	--	<=0.32 mg/m ² /day @ 40°C	DIN 4726
	1.33x10 ⁻³ in/ft°F @ 212°F	0.2 mm/(m°C) @ 100°C					
IZOD Impact Res.	No Break	No Break	--	Max. Short-term Exposure	150 psig @ 210°F (48 hr)	1035 kPa @ 99°C (48 hr)	ASTM F 876
Modulus of Elasticity	87,000-130,500 psi @68°F	600-900 N/mm ² @ 20°C	Minimum @ 20°C per DIN 16892	UV Resistance	See TB218		ASTM F2657
	43,500-58,000 psi @ 176°F	300-400 N/mm ² @ 80°C					

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FUNCTIONAL DESCRIPTION

RAUPEX SPEED is an O₂ barrier pipe with a hook and loop wrap. RAUPEX O₂ barrier pipe is manufactured using REHAU's high-pressure peroxide method for crosslinked polyethylene (PEXa). RAUPEX pipe is according to ASTM F876, F877, NSF 61, CSA B137.5 and PPI TR-3. RAUPEX SPEED O₂ barrier pipe is manufactured by REHAU using a quality management system which has been certified to the latest version of ISO 9001. This PEXa pipe is SDR 9, red in color, and compatible with RAUPEX compression nut fittings and EVERLOC® compression-sleeve fittings in accordance with ASTM F2080 and CSA B137.5. RAUPEX SPEED O₂ barrier pipe has a co-extruded oxygen diffusion barrier that exceeds the strict requirements of DIN 4726.

RAUPEX SPEED O₂ barrier pipe is ideal for use in radiant heating and cooling applications. RAUPEX SPEED O₂ barrier pipe is not to be directly buried.

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*.

MATERIAL PLANNING

For quick estimating purposes, the following guidelines may be of use for estimating the number of linear feet of pipe needed for your application. This material estimating information is not intended to be used for any particular project, nor as a final drawing requirement or specification, and is only provided as an aid for quick quotation purposes. REHAU LoopCAD® radiant design software is recommended for calculating material lists for any particular project.

Pipe Spacing in.	Material Estimating Factor Based on Pipe Spacing	Overpour Area ft ²	Material Estimating Factor	Estimated Material Requirements (round up)
5	2.4	_____	x	_____ ft
6	2.0	_____	x	_____ ft
7	1.7	_____	x	_____ ft
8	1.5	_____	x	_____ ft
9	1.4	_____	x	_____ ft
10	1.2	_____	x	_____ ft
11	1.1	_____	x	_____ ft
12	1.0	_____	x	_____ ft

Note: Overpour Area x Material Estimating Factor as per Pipe Spacing (in) = Estimated Material Requirements