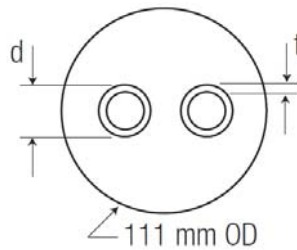


# PRODUCT SUBMITTAL 134

**Product:** OWB Insulated Pipe with RAUPEX<sup>®</sup> O<sub>2</sub> Barrier Pipe SDR 9

**Date:** 18 December 2014 (supersedes 04 November 2013)



Article No.	Description	PEXa Carrier Pipe			Outer Jacket		OWB
		d (avg) in (mm)	t (min) in (mm)	Capacity gal/ft (l/m)	Outer Diameter in (mm)	Wall Thickness in (mm)	Weight lb/ft (kg/m)
298406-001	(2) 1 in. OWB Insulated RAUPEX Pipe	1.125 (28.6)	0.125 (3.2)	2 x 0.0316 (2 x 0.394)	4.375 (111)	0.094 (2.4)	1.18 (1.76)
298416-001	(2) 1 1/4 in. OWB Insulated RAUPEX Pipe	1.375 (34.9)	0.153 (3.9)	2 x 0.0467 (2 x 0.583)	4.375 (111)	0.094 (2.4)	1.37 (2.04)

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**TECHNICAL DESCRIPTION (BY COMPONENT)**

Component	Specification	English	SI	Standard	Component	Specification	English	SI	Standard
Carrier pipe	Minimum Density	58 lb/ft <sup>3</sup>	926 kg/m <sup>3</sup>	ASTM F876	Carrier pipe	Roughness	0.00028 in	0.007 mm	--
Carrier pipe	Min. Degree of Crosslinking	70%	70%	ASTM F876	Carrier pipe	Max. Short-term Exposure	150 psi @ 210°F (48 hr)	1035 kPa @ 99°C (48 hr)	ASTM F876
Carrier pipe	Max. Thermal Conductivity	2.84 Btu-in/h-ft <sup>2</sup> ·°F	0.41 W/(m K)	DIN 16892	Insulation	Max. Thermal Conductivity	0.20 Btu-in/h-ft <sup>2</sup> ·°F (0.03 W/m·°C)		--
Carrier pipe	IZOD Impact Resistance	No Break	No Break	--	Insulation	Closed Cellular Structure	>=90 %	>=90 %	--
Carrier pipe	Modulus of Elasticity	87,000-130,500 psi @68°F 43,500-58,000 psi @ 176°F	600-900 N/mm <sup>2</sup> @ 20°C 300-400 N/mm <sup>2</sup> @ 80°C	Minimum @ 20°C per DIN 16892	Outer Casing	Color: Carbon Black > 2.5% Thermal Conductivity: 3.0 Btu-in/h-ft <sup>2</sup> ·°F (0.43 W/m·°C) Density: 59 lb/ft <sup>3</sup> (950 kg/m <sup>3</sup> )			--
Carrier pipe	O <sub>2</sub> Permeability	--	<=0.32 mg/m <sup>2</sup> /day @ 40°C	DIN 4726	Outer Casing	Maximum UV Resistance	2 years	2 years	--

**FUNCTIONAL DESCRIPTION**

Outdoor wood boiler (OWB) insulated RAUPEX Oxygen (O<sub>2</sub>) Barrier pipe is specially designed for the efficient transfer of hot water from outdoor wood boilers to residential and light commercial buildings. A flexible alternative to rigid pipe, OWB pipe offers ease of installation combined with the long-term performance of REHAU O<sub>2</sub> Barrier PEXa pipe for hydronic heating applications.

OWB pipe consists of two carrier pipes surrounded by a solid layer of polyurethane foam insulation and protected by a polyethylene casing. The two-pipe configuration combines supply and return pipes, streamlining installation. One of the carrier pipes is marked with a black line to differentiate supply from return. OWB pipe system is available in RAUPEX O<sub>2</sub> Barrier sizes 1 and 1 1/4 in. OWB pipe is coiled for shipment.

**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*.