Automotive Industry

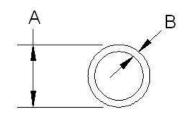


# PRODUCT SUBMITTAL 101

Product: RAUPEX® UV Shield Pipe (Red/White/Blue)

Date: 30 April 2014 (supersedes 01 August 2013)

# RAUPEX® - Red/White/Blue UV Shield Pipe



Article No.	Nominal Size in	Average OD A in (mm)	Minimum Wall Thickness B in (mm)	Weight Ib/ft (kg/m)	Capacity Gal/ft (l/m)
235331*	3/8	0.500 (12.70)	0.070 (1.78)	0.04 (0.07)	0.0050 (0.0624)
235351	1/2	0.625 (15.88)	0.070 (1.78)	0.06 (0.08)	0.0098 (0.1222)
235361+	5/8	0.750 (19.05)	0.083 (2.12)	0.08 (0.11)	0.0134 (0.1671)
235371	3/4	0.875 (22.22)	0.097 (2.47)	0.10 (0.15)	0.0189 (0.2356)
235381	1	1.125 (28.58)	0.125 (3.18)	0.17 (0.26)	0.0316 (0.3939)
132571+	1 1/4	1.375 (34.92)	0.153 (3.88)	0.25 (0.37)	0.0467 (0.5827)
132581+	1 1/2	1.625 (41.28)	0.181 (4.59)	0.35 (0.52)	0.0650 (0.8118)
132591+	2	2.125 (53.98)	0.236 (6.00)	0.60 (0.90)	0.1114 (1.3906)

<sup>\*</sup>Only available in Red or Blue

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<sup>+</sup> Only available in White

#### **TECHNICAL DESCRIPTION**

0	ForePale	01	06
Specification	English	SI	Standard
Minimum Density	58 lb/ft³	926 kg/m³	ASTM F876
Min. Degree of Crosslinking	70%	70%	ASTM F876
Max. Thermal Conductivity	2.84 BTU in/(ft <sup>2</sup> °F hr)	0.41 W/(m°K)	DIN 16892
Coefficient of Linear Expansion	9.33 x 10-4 in/ft°F @ 68°F 1.33 x 10-3 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
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

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	-
IZOD Impact Res.	No Break	No Break	
Roughness	e=0.00028 in	e=0.007 mm	-
Temperature Working Range	-40 to 200°F	-40 to 93°C	1
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 UV shield pipe is produced using the high-pressure peroxide method for crosslinked polyethylene (PEXa) in accordance with ASTM F876, F877, CSA B137.5 and PPI TR-3, and is certified to NSF 14/61 standards. RAUPEX pipe is manufactured by REHAU using a quality management system which has been certified to the latest version of ISO 9001. RAUPEX UV Shield pipe also meets the requirements of ASTM F2023 for chlorine resistance.

RAUPEX UV Shield pipe is compatible with crimp ring fittings certified to ASTM F1807 or F2159, RAUPEX compression nut fittings, and compression-sleeve fittings certified to ASTM F2080 and CSA B137.5. Use of RAUPEX UV Shield pipe in heating systems requires corrosion protection and/or isolation by using a heat exchanger or non-ferrous components throughout the system.

## PRESSURE AND TEMPERATURE LIMITS

The following pressure and temperature limits apply to the application of RAUPEX pipe for conveying hot and cold water at continuous operating temperatures with a 2.0 safety factor on allowable working pressure.

Allowable working pressure for conveying water with 2.0 safety factor on pressure					
IP	SI	Extrapolated time-to-failure prediction			
160 psi at 73.4°F	1055 kPa at 23°C	according to PPI TR-3,-4 <sup>1</sup>			
100 psi at 180°F	690 kPa at 82°C	according to PPI TR-3,-4 <sup>1</sup>			
80 psi at 200°F	550 kPa at 93°C	according to PPI TR-3,-4 <sup>1</sup>			

¹ The temperature, pressure and time-to-failure predictions are based on the ASTM D2837 standard to aid in providing technical information to the designer and does not express nor imply any additional warranty period beyond the terms and conditions defined in the REHAU PEXa Limited Warranty. The designer shall be responsible to convert this technical information into a final specification that meets the functional and aesthetic needs of the client, as well as complying with all applicable codes and local climate conditions. The designer shall determine the actual conditions and apply the appropriate safety factors as required for any particular project.