

---

# TECHNICAL BULLETIN TB256

## RAUGEO™ PRESSURE AND TEMPERATURE RATINGS

**Product:** RAUGEO Pipe

**Date:** 24 August 2015 (supersedes 01 August 2013)

RAUGEO PEXa pipe has been tested in accordance with the Plastic Pipe Institute (PPI) TR-3/2012 policy to determine the long-term hydrostatic strength of the pipe. The PPI policy is based on ASTM D2837 *Standard Test Method for Obtaining Hydrostatic Design Basis for Plastic Pipe Materials*. Accordingly, RAUGEO pipe has continuous ratings at the following pressures and temperatures based on a standard design factor (DF) of 0.5:

- 160 psi @ 73.4°F (1105 kPa @ 23°C)
- 100 psi @ 180°F (690 kPa @ 82.2°C)

PPI Policy TR-3 defines guidelines for polyethylene (PE) pipe which can use a higher design factor of 0.63, if the material meets the following requirements:

- 1) Long term temperature/pressure substantiation to PPI TR-3 section F.5
- 2) Minimum slow crack growth performance by ASTM F 1473 of 500 hours as required by ASTM D 3350
- 3) Lower confidence level (LCL) / long-term hydrostatic stress (LTHS) ratio of at least 90% as per ASTM D2837

To demonstrate that RAUGEO PEXa pipe can satisfy the requirements of Section F.7 of PPI TR-3, REHAU has coordinated testing at a certified third-party laboratory with the following conclusions:

1. Using the stress-rupture test points for RAUGEO PEXa material as per ASTM D2837, the long term temperature/pressure ratings are substantiated.
2. When tested in accordance with ASTM F1473 at 176°F (80°C) and at a test stress of 2.4 MPa, RAUGEO pipe has a minimum slow crack growth performance greater than 500 hours.
3. The ratio of the LCL of the 73°F (23°C) regression at 100,000 hours to LTHS for each data set is above the required minimum of 90% per ASTM D2837.

Since RAUGEO PEXa pipe has been demonstrated to satisfy the performance requirements of section F.7 of PPI TR-3 for PE materials, designers may apply the higher design factor of 0.63 resulting in the temperature/pressure rating of:

- 200 psi @ 73.4°F (1380 kPa @ 23°C)

For updates to this publication, visit [na.rehau.com/resourcecenter](http://na.rehau.com/resourcecenter)

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Before using, the user will determine suitability of the information for user's intended use and shall assume all risk and liability in connection therewith.

© 2015 REHAU