

## Bulletin RUD 2007 – 01

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### Medium Pressure High Density (PE 100) Polyethylene Pipe

Recently, high performance “bi-modal” high-density polyethylene (HDPE) has emerged in the North American marketplace. The pipes are labelled PE100 in accordance with ISO standards. The CSA B137 Technical Committee is currently working on a project to incorporate PE100 materials in the Canadian standard for gas distribution. These materials are capable of operating at higher pressures than current PE materials. The EUB has recognised the use of PE100, but primarily for gas gathering, in their Directive 22 (2005). However, this directive describes the MRS design methodology and references distribution gas using a separate MRS design coefficient. In addition to the EUB Directive 22, we would like to express some cautionary notes:

- Ensure designers are using the dry gas distribution Design Coefficient ( $C_a$ ) = 1.6 in the MRS design formulas outlined in clause 2.2 of EUB’s Directive 022. This is important to ensure that a 50-100 year life for your gas distribution systems.
- To ensure true high performance bimodal resins are used in the manufacture of gas distribution pipelines, a minimum PENT test value of 2000 hours should be specified in your purchase order.
- The gas distribution industry, since the early 1990s has used the international colour identification of **Yellow** for gas pipe. It is available in PE100 in the market today and therefore should also be specified in your purchase order.
- The manufacturing processes and risks of PE pipe not being extruded to specification for HDPE is no different than that of medium density resin pipelines that are in your current gas distribution systems. Therefore we require this pipe to also be included in our Quality Assurance program.
- EUB applications for PE100 must be made as Non-Routine and the EUB must review and issue its acceptance of the construction and installation procedures manuals for PE 100 construction before an approval will be issued.

This bulletin has been developed in consultation with and is supported by the EUB; questions regarding this bulletin should be directed to Bruce Partington at (780) 427-0111 or email [bruce.partington@gov.ab.ca](mailto:bruce.partington@gov.ab.ca)



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