

Indian Standard

Thermoplastics Materials for Pipes and Fittings for Pressure Applications — Classification, Designation and Design Coefficient

1 Scope

This International Standard establishes the classification of thermoplastics materials in pipe form and specifies the material designation. It also specifies a method for calculating the design stress.

It is applicable to materials intended for pipes and fittings for pressure applications.

NOTE 1 Classification, minimum design coefficient and calculation method are based on the resistance to internal pressure with water at 20 °C for 50 years, derived by extrapolation using the method given in ISO 9080.

NOTE 2 Design coefficients for multilayer pipes are described in the appropriate product (system) standards.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*

ISO 9080, *Plastics piping and ducting systems — Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

long-term hydrostatic strength

σ_{LTHS}

quantity, with the dimension of stress, which represents the predicted mean strength at a temperature θ and time t

NOTE 1 The quantity is expressed in megapascals.

NOTE 2 Temperature, θ , is expressed in degrees Celsius and time, t , is expressed in years.

3.2

lower confidence limit of the predicted hydrostatic strength

σ_{LPL}

quantity, with the dimensions of stress, which represents the 97,5 % lower confidence limit of the predicted hydrostatic strength at a temperature θ and time t