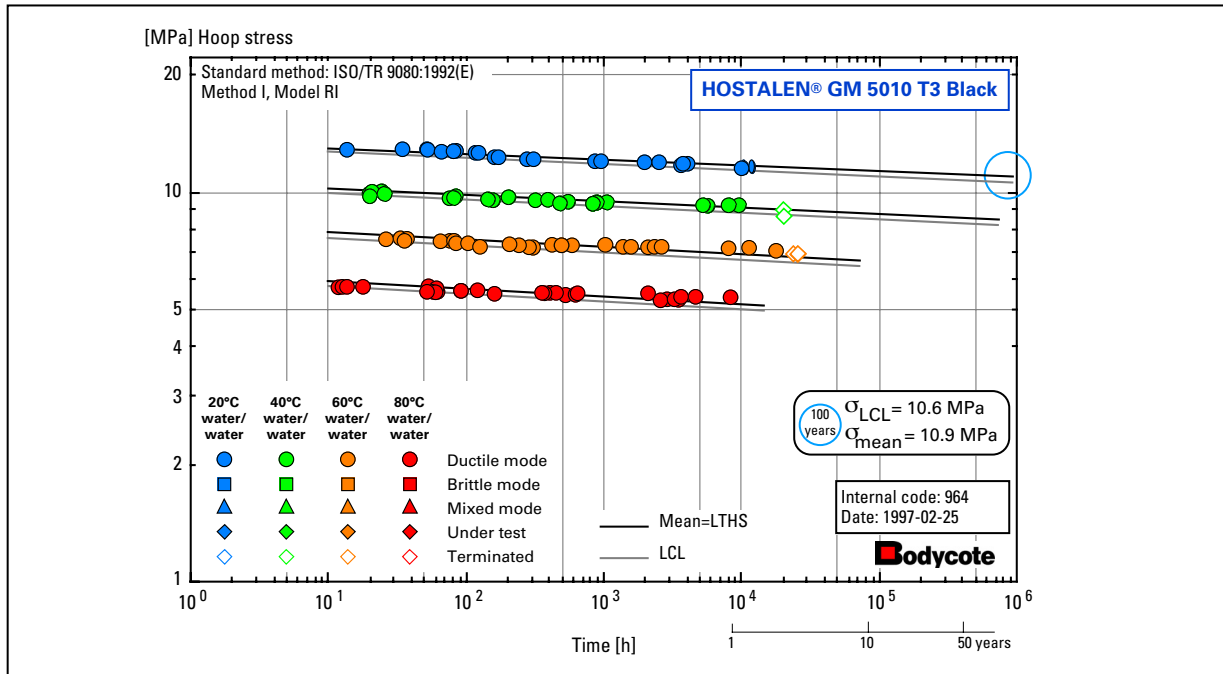


Client: Basell Polyolefins

# Regression analysis according to ISO/TR 9080 of the PE pipe grade HOSTALEN® GM 5010 T3 Black



## Introduction

Bodycote Polymer offers accredited testing and evaluation according to ISO 9080, i.e. hydrostatic pressure testing followed by evaluation of the long-term hydrostatic strength and MRS-classification according to ISO 12162.

## Task

The aim was to use the Standard Extrapolation Method (SEM) according to ISO/TR 9080:1992(E) in order to obtain a classification of the PE pipe grade Hostalen® GM 5010 T3 Black from Basell Polyolefins.

The work covers hydrostatic pressure testing at 20, 40, 60 and 80°C and a SEM-evaluation according to ISO/TR 9080:1992(E).

## Results obtained

The evaluation was performed in accordance with ISO/TR 9080:1992(E). Method I and Model RI gave the lowest lack of fit.

### Number of observations

20°C	40°C	60°C	80°C
25	26	29	31

### Extrapolated strength values

Temp °C	Time yrs	$\sigma_{LCL}$ MPa	$\sigma_{LTHS}$ MPa
20	106	10.6	10.9
40	82.9	8.17	8.45
60	8.29	6.43	6.66
80	1.65	4.91	5.11

**Classification: MRS = 10 MPa**

Please contact us for further information!