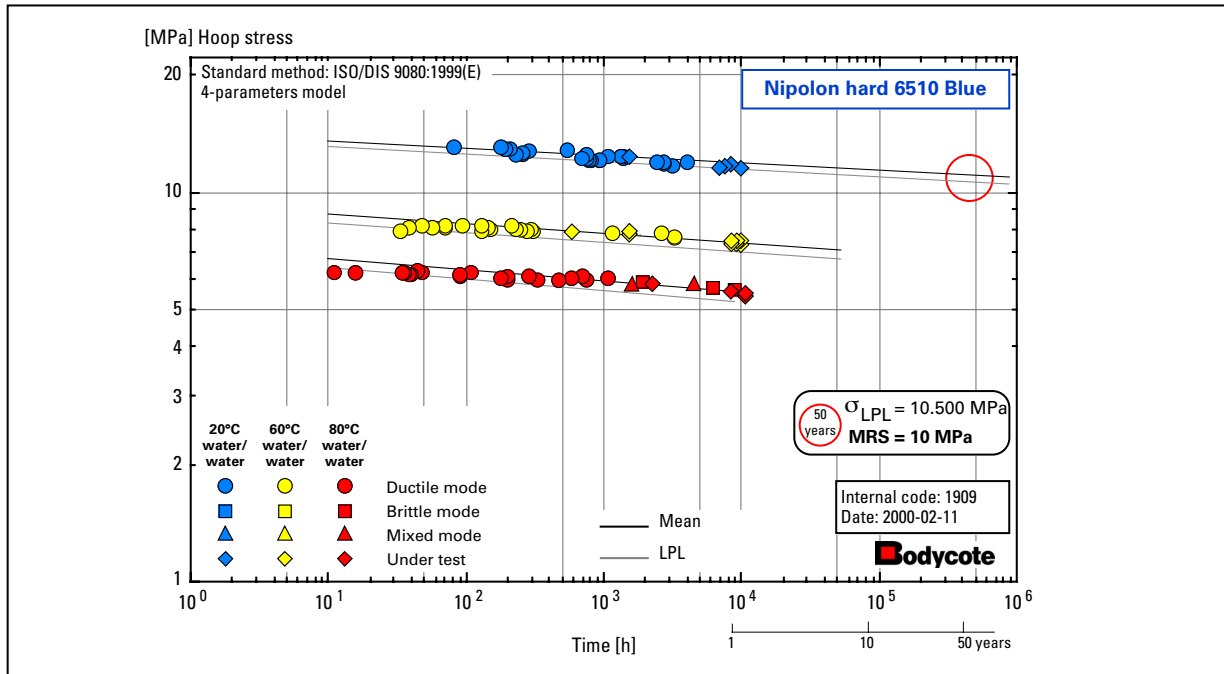


Client: Tosoh Corporation

# Regression analysis according to ISO/DIS 9080 of the PE pipe grade Nipolon hard 6510 Blue



## 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/DIS 9080:1999(E) in order to obtain a classification of the PE pipe grade Nipolon hard 6510 Blue.

The work covers hydrostatic pressure testing at 20, 60 and 80°C and a SEM-evaluation according to ISO/DIS 9080:1999(E).

## Results obtained

The evaluation was performed in accordance with ISO/DIS 9080:1999(E). The 4-parameters model gave the best fit.

### Number of observations

20°C	60°C	80°C
30	30	30

### Extrapolated strength values

Temp °C	Time yrs	$\sigma_{LPL}$ MPa	$\sigma_{LTHS}$ MPa
20	50.0	10.500	10.922
20	101	10.351	10.777
60	6.06	6.677	7.009
80	1.01	5.199	5.487

**Classification: MRS = 10 MPa**

Please contact us for further information!