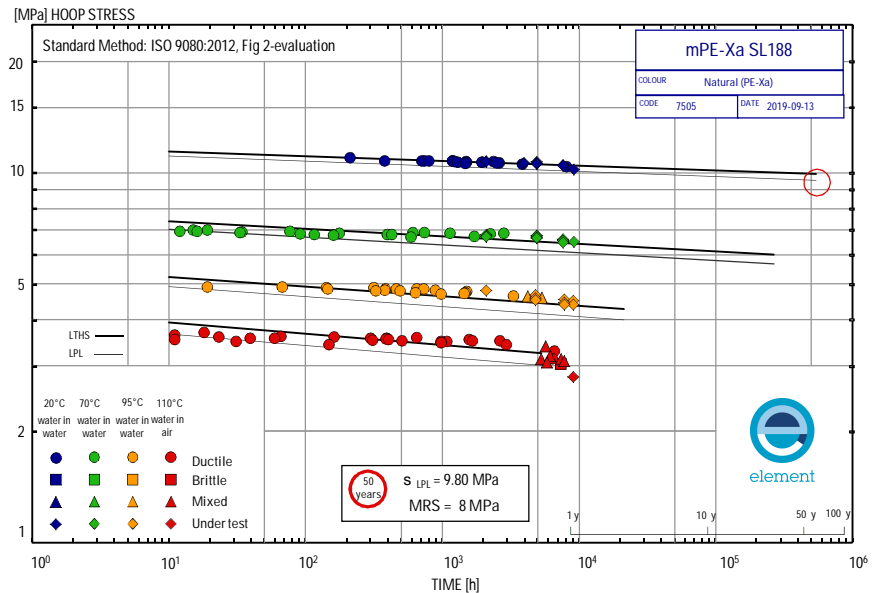# CLIENT: LG Chem

REGRESSION ANALYSIS ACCORDING TO EN ISO 9080 OF THE NATURAL PEX PIPE GRADE mPE-Xa SL188

INTRODUCTION

Element offers accredited testing and evaluation according to EN 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 evaluate the pipe compound according to EN ISO 9080:2012, in order to obtain a MRS-classification according to ISO 12162:2009 of the natural PEX pipe grade mPE-Xa SL188 from LG Chem.

RESULTS OBTAINED

The evaluation was performed in accordance with EN ISO 9080:2012. More information can be found in Element Report P-19/90-v2.

EXTRAPOLATED STRENGTH VALUES

T [°C]	Time [Yrs]	S_{LPL} [MPa]	S_{LTHS} [MPa]
20	50.0	9.80	10.08
20	*100**	*9.72*	*10.01*
70	31.2	6.18	5.90
70	*50.0**	*5.86*	*6.13*
95	2.50	4.38	4.15
110	0.62	3.31	3.11

*The extrapolation time at this temperature is longer than allowed by the t_{max}.

CLASSIFICATION

MRS = 8 MPa

This only covers the EN ISO 9080-evaluation, MRS classification and material designation. Any additional requirements for PEX 80 pipe compounds are given in the relevant product standards.

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