
TEST CERTIFICATE

This document certifies that

STABIL-552FE20

from

ATO S.r.l.

has been evaluated to

**NORSOK M-710 Rev. 2 in respect of sour gas resistance in
operating conditions up to 220°C**

Test fluid: 10% hydrogen sulphide/hydrocarbon oil/water

Test pressure: 100 bar (10 MPa)

Passed by: Dr Michael Lewan

Date: 7th November 2014

Element verify that tensile specimens (ASTM D638-10 Type IV) of STABIL-552FE20 supplied by ATO s.r.l. have been exposed in a multi-phase sour fluid at three elevated temperatures.

Test Conditions

Exposure fluid composition and distribution

Volume (%)	Composition
30	10/5/85 mol% H ₂ S/CO ₂ /CH ₄
10	Distilled water
60	70% heptane, 20% cyclohexane, 10% toluene

The STABIL-552FE20 testpieces were placed in the hydrocarbon liquid phase for each exposure test. Test temperatures and sampling intervals used in the NORSOK M-710¹ programme are shown in the table below; test pressure was ca100 bar.

Exposure test conditions

Temperature (°C)	Intervals (days)
200	7, 14, 28, 49
210	6, 12, 21, 42
220	5, 10, 20, 35

Summary

MATERIAL	YOUNG'S MODULUS¹	MAX STRESS¹	ELONGATION AT BREAK¹
STABIL-552FE20	PASS	PASS	PASS

¹ changes within ±50% range, from as-received level

¹ NORSOK M-710, "Qualification of non-metallic sealing materials and manufacturers", Rev. 2, October 2001