

Elastocon

Testing with precision

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Our calibration lab is
accredited by Swedac



Elastocon is a company well familiar with testing and laboratory activities since several of the company personnel originally worked at SP Technical Research Institute of Sweden.

Göran Spetz had, when he started Elastocon, a great deal of experience in rubber technology, first as lab manager at Firestone in Borås for 11 years and later as manager for the rubber testing at the SP Technical Research Institute for 12 years.



When developing and selling testing instruments this knowledge is of great importance.

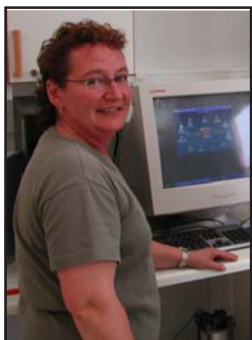
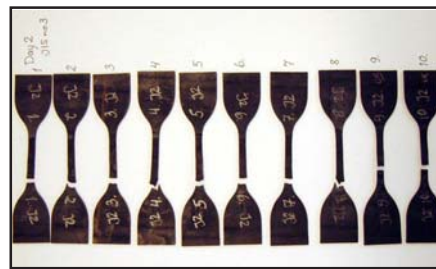
To continuously perform polymer testing commissioned by our customers gives us good feedback and makes our product development more efficient.

At Elastocon we have always done this type of testing but we have now decided to promote this part of the company more. To be able to commit to more testing commissions we have obtain instruments for further test methods. The instruments will also be used for demonstration.

Besides material testing we offer consultancy services like lifetime estimation, material specifications, selection of material, quality system and education.

Göran Spetz

Managing Director



Ann-Cathrine Magnå has 25 years of experience from polymer testing and is Laboratory Manager.

You can contact her at ann-cathrine.magna@elastocon.se

Testing...

Which rubber tests can we perform?

Test methods for Rubber

ISO 34-1	A, B & C	Tear test
ISO 36		Peel test
ISO 37		Tensile test
ISO 48		Hardness IRHD
ISO 188	method A	Heat ageing
ISO 815	A & B	Compression set
ISO 1407		Extraction
ISO 1408		Carbon black content
ISO 1432		Gehman low temperature stiffness
ISO 1817		Effects of liquids
ISO 1853		Volume resistivity
ISO 2285	metod A & B	Tension set
ISO 2781		Density
ISO 2921		TR-test
ISO 3384	A, B, C	Stress Relaxation
ISO 4649		Abrasion test
ISO 4662		Resilience test
ISO 6452		Fogging test
ISO 6914		Relaxation in tension
ISO 7619	A & D	Shore hardness
ISO 7743		Compression test
ISO 8013		Creep
ISO 11346		Lifetime estimation

Hardness Testing



Stress Relaxation



Tensile test



Compression set



Which plastic tests can we perform?

Test methods for Plastic

ISO 60 A	Apparent density	
ISO 175	Effects of liquids	
ISO 178	Flexural test	
ISO 179	Impact test Charpy	
ISO 180	Impact test Izod	
ISO 306	Vicat /HDT	
ISO 527	Tensile test	
ISO 868	A & D	Hardness Shore
ISO 899	Creep	
ISO 1133	Melt index	
ISO 1183	Density	
ISO 8295	Friction	

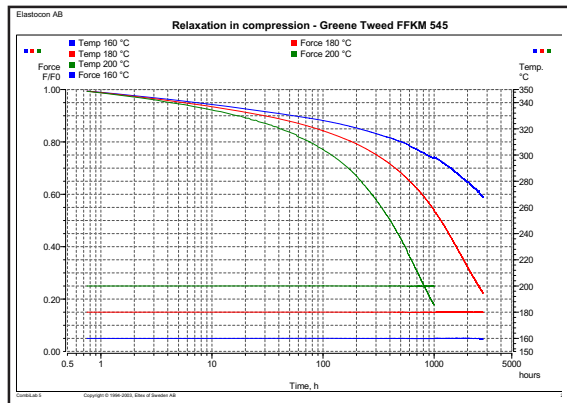
All instruments may not always be available

Lifetime estimation

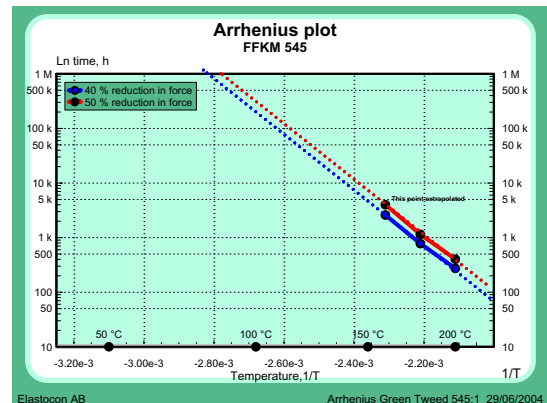
One of our specialties is lifetime estimation, especially of rubber materials.

The testing is performed at three different temperatures and a critical property is tested until the function is finished.

When testing rubber, it's common to use stress relaxation in either compression or tension. The points at 50 % reduction in force at each temperature will be plotted in an Arrhenius graph and the lifetime at lower temperatures can be extrapolated.



Relaxation Green Tweed



Arrhenius Green Tweed

Standardisation

To participate in the standardisation of rubber test methods is important when working with testing. Two of the company personnel are active within the Swedish standards and in ISO TC 45.

Göran is the chairman of the Swedish SIS committee for rubber and chairman for TC45/SC2 test methods. Ann-Cathrine is chairman for TC45/SC4/WG2.

The involvement in the standardisation gives a good knowledge of the latest test methods. It's also an opportunity to meet several interesting people like the chemistry Nobel Prize winner, Mr Tanaka from Shimadzu in Japan.



Selection of material

We can assist you with a material specification for the material in your products and make continuous test of your delivered products. This can be very important for your product quality.

Quality

Quality work is important, that is why our company is ISO 9000 certified. We also have our own accredited calibration laboratory, which makes sure that our instruments are properly calibrated.

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Material specification

Table 34 – Basic properties – EPM, EPDM type 3

Property	Hardness and type number			Test method		
	60-3	70-3	80-3			
Hardness	IRHD	–	60 ± 5	70 ± 5	80 ± 5	SS-ISO 48
Tensile strength	MPa	Min	7	8	8	SS-ISO 37
Elongation at break	%	Min	200	175	150	SS-ISO 37
Tension set 125 °C/24h and 50% strain	%	Max	30	30	30	SS-ISO 2285
Tear resistance	N/mm	Min	8	10	10	SS-ISO 34-1; Method C
Compression set 125 °C/24h	%	Max	30	30	30	SS-ISO 815 ¹⁾ Test pieces type A
	%	Max	50	50	50	
Change in hardness 125 °C/72h	IRHD	Max	+ 5	+ 5	+ 5	SS-ISO 48 ¹⁾
	IRHD	Max	+ 10	+ 10	+ 10	
Change in tensile strength 125 °C/72h	%	Max	- 10	- 10	- 10	SS-ISO 37 ¹⁾
	%	Max	- 20	- 20	- 20	
Change in elongation at break 125 °C/72h	%	Max	- 15	- 15	- 15	SS-ISO 37 ¹⁾
	%	Max	- 30	- 30	- 30	
Ozone resistance 50 pphm/40 °C/96h	%	Min	80	60	60	SS-ISO 1431-1 Procedure C

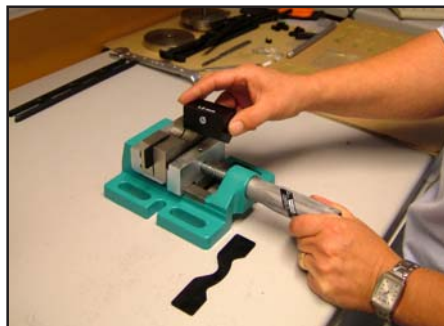
1) Ageing in accordance with SS-ISO 188, Method A

Table 35 – Supplementary properties – EPM, EPDM type 3

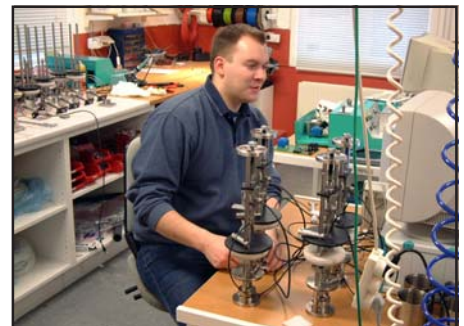
Property	Hardness and type number			Test method			
	60-3	70-3	80-3				
Cold-resistant (C)	Temp. retraction TR ₁₀	°C	Max	- 35	- 35	- 35	SS-ISO 2921
	Temp. retraction TR ₂₀	°C	Max	- 25	- 25	- 25	SS-ISO 2921



Sample preparation



Notching of tear sample



Calibration of relaxation rigs

Education

We can offer education both at the company and out in the field. This are some examples of themes:

- Rubber testing
- Plastic testing
- Rubber material
- Calibration
- Calculation of measurement of uncertainty



Higher education in rubber testing



Course in testing for foreign students



Calibration course