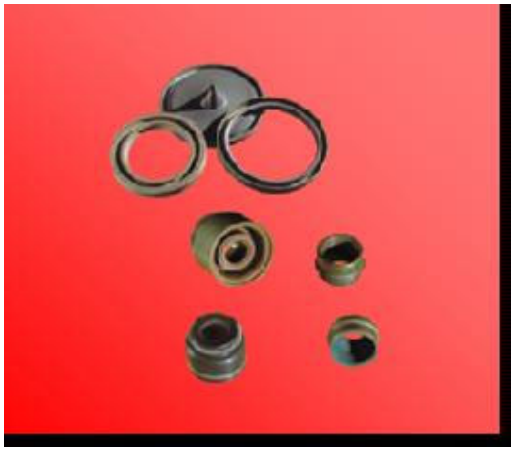
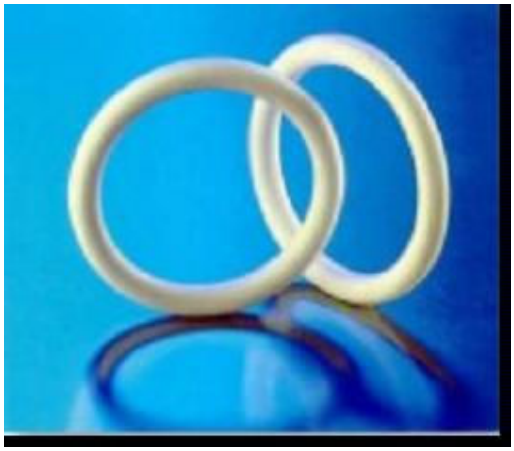
Tecnoflon®
N 90 HS

Raw copolymer





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Tecnoflon® N 90 HS

GENERAL FEATURES

TECNOFLON® N 90 HS is a medium viscosity fluoroelastomer copolymer. It does not contain curatives: therefore the proper levels of Tecnoflon® XA51 (proprietary Ausimont curing system) or Tecnoflon® FOR M1/Tecnoflon® FOR M2 must be added to achieve the required properties. This material is based on our breakthrough technology on bisphenol curable fluoroelastomers. Tecnoflon® N 90 HS can be compounded to meet all the major fluoroelastomer specifications with only a 1 hour post cure and without using Calcium Hydroxide. Tecnoflon® N 90 HS is well suited for all applications requiring superior flow, mould release and excellent compression set.

Some of the unique properties of **TECNOFLON® N 90 HS** are:

- Low post cure time of 1 hour
- Curable without Calcium Hydroxide
- Excellent mould release
- Lack of mould fouling
- Lower compound viscosity
- Good scorch safety

TECNOFLON® N 90 HS can be used for injection, compression and transfer moulding of O-rings, gaskets and seals. The material can be extruded into hoses or profiles and can be calendered to make sheet stocks or belting. The product can be mixed using typical fluoroelastomers compounding ingredients and mixing can be accomplished with two-roll mills or internal mixers. Finished goods can be produced by a variety of rubber processing methods.

Basic characteristics of the raw polymer are as follows:

PROPERTIES	TYPICAL VALUES
ML (1+10') @ 121°C	40
Fluorine content (%)	66
Specific gravity (g/cc)	1.81
Colour	Translucent
Packaging / Form	Slabs
Solubility	Ketones and esters

HANDLING AND SAFETY

Normal care and precautions should be taken to avoid skin contact, eye contact and breathing of fumes. Smoking is prohibited in working areas. Wash hands before eating or smoking. For complete health and safety information, please refer to the material safety data sheet.

Rev. 01/2003

TYPICAL RHEOLOGICAL PROPERTIES

CURABLE WITHOUT CALCIUM HYDROXIDE

TEST COMPOUND			
Tecnoflon® N 90 HS		100	100
Tecnoflon® XA51	phr	2.5	-
Tecnoflon® FOR M1	phr	-	4
Tecnoflon® FOR M2	phr	-	1.5
MgO DE	phr	7	7
N-990 MT Carbon Black	phr	30	30

Mooney Viscosity ML (1+10') @ 121°C	MU	68	70

Mooney Scorch MS 135°C			
MV	MU	29	30
t_{15}	min	> 60	> 60

MDR 12 min @ 177°C arc 0.5			
Minimum Torque	lb*in	1.9	1.9
Maximum Torque	lb*in	18.3	17.5
t_{s2}	min	1.3	2.7
t'_{50}	min	1.6	4.5
t'_{90}	min	2.2	6.2

MDR 12 min @ 170°C arc 0.5			
Minimum Torque	lb*in	2.0	1.9
Maximum Torque	lb*in	18.6	17.0
t_{s2}	min	2.0	4.2
t'_{50}	min	2.6	6.8
t'_{90}	min	3.5	8.9

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Tecnoflon® N 90 HS

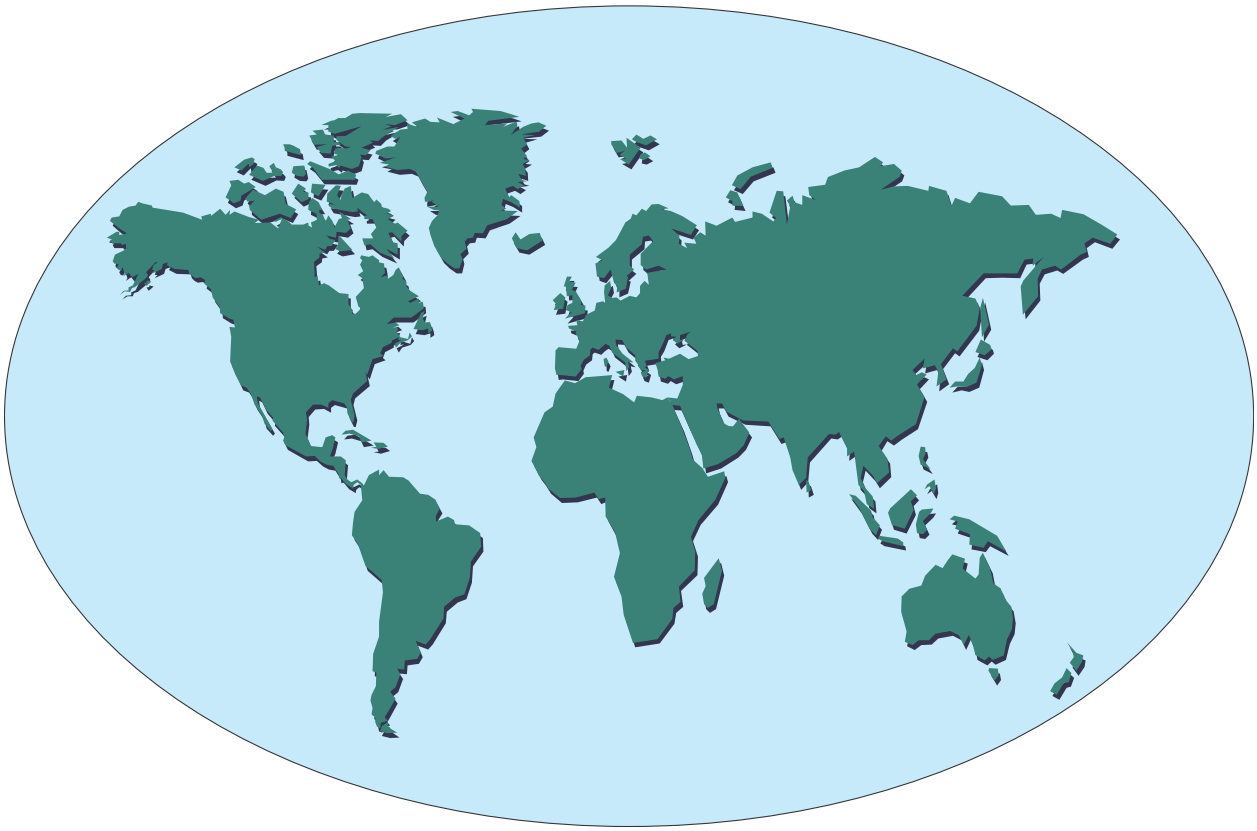
TYPICAL PHYSICAL PROPERTIES

CURABLE WITHOUT CALCIUM HYDROXIDE

TEST COMPOUND			
Tecnoflon® N 90 HS		100	100
Tecnoflon® XA51	phr	2.5	-
Tecnoflon® FOR M1	phr	-	4
Tecnoflon® FOR M2	phr	-	1.5
MgO DE	phr	7	7
N-990 MT Carbon Black	phr	30	30

MECHANICAL PROPERTIES			
Post Cure: 1 h @ 250°C			
100 % Modulus	MPa	6.1	n.a.
Tensile Strength	MPa	17.5	n.a.
Elongation at Break	%	220	n.a.
Hardness	ShoreA	71	n.a.
Post Cure: 4 h @ 250°C			
100 % Modulus	MPa	6.1	5.4
Tensile Strength	MPa	17.2	15.2
Elongation at Break	%	212	203
Hardness	ShoreA	71	70
Post Cure: (8+16) h @ 250°C			
100 % Modulus	MPa	6.4	5.6
Tensile Strength	MPa	17.6	14.5
Elongation at Break	%	199	186
Hardness	ShoreA	71	70

COMPRESSION SET (25 % Deformation on #214 O-Ring, ASTM D395 Method B)			
Post cure 1 h @ 250°C	%	17	n.a.
Post cure 4 h @ 250°C	%	16	16
Post cure (8+16) h @ 250°C	%	15	14



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