

C150-M00



Introduction

Eliflon C150 fluoroelastomer is a high viscosity copolymer of hexafluoropropene and vinylidene fluoride particularly suitable for injection or compression moulding of sealing devices that must meet the most critical conditions of usage.

Eliflon C150 has been specially designed to improve mechanical properties especially at elevated temperatures. Moreover, in the appropriate formulation of the compound solves the problems related to a rapid decompression.

Eliflon C150 fluoroelastomer offers significant processing ease that can be modified when blended with similar fluoroelastomers. Eliflon C150 is especially suited to curing with bisphenol-phosphonium salt systems.

Application

- Injection Moulded goods
- O rings
- Gaskets, seals and profiles
- Extruded cords

Safety and Handling

Despite the chemical inertness at ambient temperature, Eliflon T types fluoroelastomers should be handled in such a way to avoid contact with skin and eyes. In case of contact, wash thoroughly with soap and water. Store in a well ventilated place away from any source of heat. Smoking is strictly forbidden in working and storage areas. In the event of fire, toxic gases are produced. Refer to MSDS for additional information. For the safe handling of other compound ingredients normally used in fluoroelastomers compounding, please refer to the respective manufacturers.

Product Description

Chemical Composition	Copolymer of hexafluoropropene and vinylidene fluoride
Physical Form	Slabs
Color	Off white
Odor	Odorless
Specific Gravity	1,81 ± 0,02 g/cm ³
Fluorine Content	66 %
Glass transition temperature (Tg)	- 18 ± 1 °C
Solubility	Low molecular weight esters and ketones
Storage Stability	Excellent
Mooney Viscosity, ML 1+10 at 121 °C (250 °F)	150 MU

Eliflon C150-M00 special Compound

	high temperature compound	explosive decompression compound	
Eliflon C150-M00	94,25	93,32	phr
High activity magnesium oxide (MgO)	5	3	phr
Calcium Hydroxide (Ca(OH)₂)	5	4	phr
Carbon Black	16	-	phr
Hi surface area Carbon Black	-	35	phr
Eliflon Curative 1¹	5,25	5,04	phr
Eliflon Curative 3²	0,50	1,64	phr
Processing aids (wax)	1	1	phr

1) Fluoroelastomer masterbatch 33% by weight of Bisphenol AF (4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bisphenol) and Benzyltriphenylphosphonium salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bisphenol (1:1)

2) Fluoroelastomer masterbatch 33% by weight of Benzyltriphenylphosphonium chloride

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Via Vittoria, 1
40068 San Lazzaro di Savena (BO) - Italy
Phone +39 (0) 51 6255442
E-mail info@sersar.net
www.sersar.net/

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Performance of Eliflon C150-M00 in typical Compound

STOCK PROPERTIES

ODR at 177 °C, 3° arc, 12 min

	high temperature compound	explosive decompression compound	
ML	57,45	61,98	dN*m
T _s 2	1,36	2,28	min
T _c 90	4,34	9,17	min
MH	168,50	195,99	dN*m

VULCANIZATE PROPERTIES

Slabs cured 10 min at 180°C, 110 kPa, post cured 3+18 hrs at 230°C

	high temperature compound	explosive decompression compound	
100% modulus	5,5	16,2	MPa
Tensile strength	14,5	18,2	MPa
Elongation at the break	232	115	%
Hardness	68	87	ShoreA

Mechanical properties at 23°C, after aging in air 70 hrs at 250°C

	high temperature compound	explosive decompression compound	
100% modulus	4,7	15,0	MPa
Tensile strength	13,4	17,0	MPa
Elongation at the break	200	105	%
Hardness	70	90	ShoreA

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Swelling resistance in test fluids, Δ Volume %

	high temperature compound	explosive decompression compound	
Fuel C, 70 hr at 23°C	+3,4	+3,0	%
Methanol (99%), 70 hr at 23°C	+73	+70	%
IRM 903 Oil, 70 hr at 150°C	+1,7	+1,7	%

Compression set, Method B disks, 25% def.

	high temperature compound	explosive decompression compound	
Aged 70 hr @ 250°C	31	-	%
Aged 70 hr @ 200°C	-	15,7	%

Test procedures

Compression Set {22 h @200°C, 25% deformation}	ASTM D 395, Method B
Compression Set {70 h @250°C, 25% deformation}	DIN ISO 7619-1
Hardness	ASTM D 2240, Durometer A(Shore A)
ODR (Oscillating Disk Rheometer)	ASTM D2084
Mooney viscosity	ASTM D 1646
Property change after oven heat aging	ASTM D 573
Stress strain properties	ASTM D 412
Volume change in fluids	ASTM D 471

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