

NOXTITE® FKM / Fluoropolymer Selection Guide

including CHEMINOX® FKM curing agents

Product Name	¹ ML(1+10) @ 121°C	Polymer Structure	Fluorine Cont. [wt.-%]	² Tg [°C]	Compound Formulation	³ C.S. [%] 70 h / 200°C	Key Features
POLYMER PROPERTIES				ELASTOMER PROPERTIES			
Peroxide Curable FKM Polymers for best Chemical Resistance							
• Dynamic Performance Grade							
RE 620	20	VdF HFP	66	-20	A	35	Low mooney version of RE 635, best tear resistance & hose FKM, excellent extrudability, high dynamic performance, outstanding fatigue properties
RE 635	30	VdF HFP	66	-20	A	31	Best tear resistance & hose FKM, excellent extrudability, high dynamic performance, outstanding fatigue properties
• Medium Fluorine Allround Grades							
RE 440	30	VdF HFP TFE	69	-7	B	29	Easy to process sealing grade, suitable for fuel application
RE 461	35	VdF HFP TFE	68	-18	B	26	Standard medium fluorine FKM, easy extrudability
RE 463	40	VdF HFP TFE 3D-technology	68	-18	B	17	Advanced medium fluorine FKM, no post cure needed
RE 464	23	VdF HFP TFE	67	-21	B	28	
• Extreme Fluid Resistant High-Fluorine Grades							
RE 430	25	VdF HFP TFE 3D-technology	>70	-6	B	20	Excellent dynamic properties and fuel (FAM-B) permeation resistance, well balanced heat and compression set resistance
RE 431	65	VdF HFP TFE 3D-technology	>70	-4	B	19	
• Low Temperature Grades							
RE 556	52	VdF TFE PMVE 3D-technology	64	-30	C	16	Standard low temperature FKM
RE 557	30	VdF TFE PMVE 3D-technology	64	-30	C	15	Easy to process low temperature FKM
Specialties							
• Viscosity Modifier (Peroxide Curable)							
RE 462	10	VdF HFP TFE	68	-18	B	29	General viscosity modifier for all FKM elastomers
RE 558	10	VdF TFE PMVE	64	-31	C	20	Low temperature modifier for all FKM elastomers
• XT-FKM-Carbon Black Masterbatch (Peroxide Curable)							
R 0248	30	Proprietary	>71	-9	On request	35	Excellent fuel and permeation resistance (e.g. OME 3-5 mixtures with FAM-B or Diesel) ⁴
Bisphenol Curable FKM Polymers for highest Heat Resistance							
• Common FKM Grades							
RE 225	30	VdF HFP	66	-18	D	16	Favorable FKM copolymer base gums
RE 245	42	VdF HFP	66	-19	D	16	
RE 246	35	VdF HFP	66	-19	F	29	Precompound copolymer (cure system & bonding promotor) for superior batch-to-batch consistency
• High Performance FKM Grades							
RE 353	25	VdF HFP TFE	68	-14	E	26	Low viscosity & calandering terpolymer base gum
RE 376	25	VdF HFP TFE	66	-21	E	14	Low temperature design & easy processing
All properties provided are typical properties and not intended to serve as specifications							
¹) JIS K6300 method; ²) Tg is based on the polymer, DIN EN ISO 11357-2 method; ³) ASTM D395 method B, P-24 O-ring, air; ⁴) OME = CH ₃ -O-(CH ₂ -O) _n -CH ₃ = Oxymethylenether = E fuel; VdF: vinylidene difluoride; HFP: hexafluoropropylene; TFE: tetrafluoroethylene; PMVE: perfluoro(methyl vinyl ether)							

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CHEMINOX® Curing Systems for NoxTite® FKMs		Ingredients / Appearance
AF 50 FR	Curing agent, FKM bound sheets	Bisphenol AF = (4,4'-[2,2,2-Trifluoro-1-(trifluoromethyl)ethylidene]diphenol, 50%) and FKM binder (50%); high dispersable curative for heat resistant bisphenol curable FKM
B 35 F	Accelerator, FKM bound sheets	Benzyl triphenyl phosphonium chloride (35%) and FKM binder (65%); high dispersable activator for heat resistant bisphenol curable FKM

Exemplary Compound Formulations	A	B	C	D	E	F
Hardness Duro A	70±5	70±5	75±5	75±5	70±5	75±5
NOXTITE® Polymer (phr)	100	100	100	100	100	100 (precompound)
MT (N990) (phr)	20	30	30	25	25	25±5
Magnesium oxide (phr)				3	3	3
Calcium hydroxide (phr)				5	6	5
Zinc oxide (phr)	5	5	5			
CHEMINOX® AF-50FR (phr)				4	4	
CHEMINOX® B-35F (phr)				1	1	
TAIC WH-60 (phr)	5	4	6.7			
2,5-Bis(<i>tert</i> -butylperoxy)-2,5-dimethylhexane; 40% dispersion on silica (phr)	3.5	1	2			

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