

# NOXTITE® FKM / Fluoropolymer Selection Guide

including CHEMINOX® FKM curing agents

Product Name	<sup>1</sup> ML(1+10) @ 121°C	Polymer Structure	Fluorine Cont. [wt.-%]	<sup>2</sup> Tg [°C]	Compound Formulation	<sup>3</sup> C.S. [%] 70 h / 200°C	Key Features
<b>POLYMER PROPERTIES</b>				<b>ELASTOMER PROPERTIES</b>			
<b>Peroxide Curable FKM Polymers for best Chemical Resistance</b>							
• <b>Dynamic Performance Grade</b>							
RE 635	30	VdF   HFP	66	-20	A	31	Best tear resistance & hose FKM, excellent extrudability, high dynamic performance, outstanding fatigue properties
• <b>Medium Fluorine Allround Grades</b>							
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 <b>3D-technology</b>	68	-18	B	17	Advanced medium fluorine FKM, no post cure needed
RE 464	23	VdF   HFP   TFE	67	-21	B	28	
• <b>Extreme Fluid Resistant High-Fluorine Grades</b>							
FX 4300	30	VdF   HFP   TFE	>70	-5	B	26	Easy extrudability and outstanding fuel (FAM-B) permeation resistance
FX 4304	65	VdF   HFP   TFE <b>3D-technology</b>	>70	-4	B	19	Excellent dynamic properties and fuel (FAM-B) permeation resistance, well balanced heat and compression set resistance
FX 4305	25	VdF   HFP   TFE <b>3D-technology</b>	>70	-6	B	20	
• <b>Low Temperature Grades</b>							
RE 556	52	VdF   TFE   PMVE <b>3D-technology</b>	64	-30	C	16	Standard low temperature FKM
RE 557	30	VdF   TFE   PMVE <b>3D-technology</b>	64	-30	C	15	Easy to process low temperature FKM
<b>Specialties</b>							
• <b>Viscosity Modifier (Peroxide Curable)</b>							
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
<b>Bisphenol Curable FKM Polymers for highest Heat Resistance</b>							
• <b>Common FKM Grades</b>							
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
• <b>High Performance FKM Grades</b>							
RE 351	45	VdF   HFP   TFE	68	-13	E	28	Standard higher fluorine terpolymer for excellent chemical and wear resistance
RE 353	25	VdF   HFP   TFE	68	-14	E	26	Low viscosity & calendering 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)** IIS 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

VdF: vinylidene difluoride; HFP: hexafluoropropylene; TFE: tetrafluoroethylene; PMVE: perfluoro(methyl vinyl ether)

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CHEMINOX® FKM Curing Agents		Ingredients / Appearance
AF 50 FR	Curing agent, FKM bound sheets	Bisphenol AF = 4,4'-(Hexafluoroisopropylidene)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
ACR 2510	Accelerator, FKM bound granules	Tetrabutyl ammonium bromide (10%) and FKM binder (90%); high dispersable activator for 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
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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