

# Fluorinated Elastomers Explained by Monomer Composition

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ASTM D1418 Cure System Monomers	FKM Type 1	FKM Type 2	FKM Type 2	FKM Type 3	FKM Type 4	FKM Type 5	Very Low Temp*	FEPM	FEPM	FFKM
	Bisphenol Cured	Bisphenol Cured	Peroxide Cured	Peroxide Cured	Bisphenol Cured	Peroxide Cured	Peroxide Cured	Peroxide Cured	Peroxide Cured	Various
	VF2	VF2	VF2	VF2	VF2	VF2	VF2	TFE	E	TFE
	HFP	HFP	HFP	PMVE	P	HFP	HFP	P	TFE	PMVE
		TFE	TFE	TFE	TFE	TFE	TFE		PMVE	CSM
			CSM	CSM		PMVE	PMVE			
					E	MOVE				
					CSM	CSM				

\*MOVE is required for very low temp polymers

CSM typically contains a Bromine or Iodine

VF2 = Vinylidene Fluoride /  $\text{CH}_2=\text{CF}_2$

HFP = Hexafluoropropylene /  $\text{CF}_2=\text{CF}-\text{CF}_3$

TFE = Tetrafluoroethylene /  $\text{CF}_2=\text{CF}_2$

PMVE = Perfluoromethylvinylether /  $\text{CF}_2=\text{CF}-\text{OCF}_3$

MOVE =  $\text{CF}_2=\text{CF}-\text{OCF}_2\text{O}-\text{CF}_3$

E = Ethylene /  $\text{CH}_2=\text{CH}_2$

P = Propylene /  $\text{CH}_2=\text{CH}-\text{CH}_3$

CSM = Cure Site Monomer

FKM = Fluoroelastomer, FFKM = Perfluoroelastomer

**Performance of a fluorinated elastomer can vary dramatically based on monomer composition, monomer ratios, monomer sequence, cure system, molecular weight, & fillers.**