

**ELASTOMER PHYSICAL PROPERTIES
FOR RPP DIAPHRAGMS**

RPP #	ASTM DESIGNATION	DESCRIPTION	DUROMETER (SHORE A)	TENSILE		MODULUS 300%		ELONGATION (%)	TEMPERATURE RANGE	
				(PSI)	(BAR)	(PSI)	(BAR)		(°F)	(°C)
E09	ACM	Polyacrylate	45/55	870	59	400	27	550	0 to +325	-18 to +163
E01	CR	Neoprene	35/45	1575	107	430	29	430	-25 to +250	-31 to +121
E06	CR	Neoprene	50/60	1200	81	300*	20*	250	-20 to +250	-29 to +121
E154	CR	Neoprene	63/73	1200	81	320*	21*	220	-20 to +250	-29 to +121
E17	ECO	Epichlorohydrin	53/63	625	42	340*	23*	150	-20 to +300	-29 to +149
E107	EPDM	Ethylene Propylene	45/55	1750	119	400	27	500	-40 to +350	-40 to +177
E109	EPDM	FDA Ethylene Propylene	50/60	1100	74	350	23	500	-35 to +350	-37 to +177
E111	EPDM	Ethylene Propylene	55/65	2000	136	500	34	600	-35 to +350	-37 to +177
E112	EPDM	FDA Ethylene Propylene	65/75	1000	68	750	51	350	-30 to +400	-35 to +204
E145	EPDM	Ethylene Propylene	65/75	1500	102	400*	27	200	-30 to +400	-35 to +204
E147	EPDM	Ethylene Propylene	61/71	1000	68	400	27	300	-30 to +350	-35 to +177
E67	FPM	Fluorocarbon	60/70	800	54	300*	20*	300	+10 to +550	-12 to +288
E46	FSI	Fluorosilicone	55/69	1100	74	200*	13*	230	-80 to +450	-62 to +232
E03	NBR	Nitrile	37/47	1015	69	400	27	450	-45 to +250	-43 to +121
E16	NBR	Nitrile	43/53	1160	78	450	30	400	-40 to +250	-40 to +121
E20	NBR	Nitrile	55/65	1800	122	850	57	450	-40 to +250	-40 to +121
E25	NBR	Nitrile	70/80	1600	108	500*	34*	250	-40 to +250	-40 to +121
E32	NBR	FDA Nitrile	69/80	2150	146	625*	42*	210	-40 to +250	-40 to +121
E54	NBR	Nitrile	57/67	1750	119	1200	81	320	-50 to +250	-46 to +121
E55	NBR	Nitrile	65/75	1750	119	650*	44*	185	-40 to +250	-40 to +121
E82	NBR	FDA Nitrile	55/65	1130	76	470	32	350	-40 to +250	-40 to +121
E113	NBR	Nitrile	57/67	1300	88	600	40	500	-40 to +250	-40 to +121
E127	NBR	Saturated Nitrile	63/73	2000	136	420*	28*	250	-30 to +250	-35 to +121
E130	NBR	Nitrile	54/64	1460	99	900	61	270	-45 to +250	-43 to +121
E138	NBR	Nitrile	65/75	1600	108	625*	42*	150	-40 to +250	-40 to +121
E140	NBR	Nitrile	80/90	1600	108	1400*	95*	85	-25 to +250	-32 to +121
E141	NBR	Nitrile	55/65	2400	163	285*	19*	500	-30 to +250	-35 to +121
E08	SI	Silicone	47/57	750	51	650	44	275	-60 to +500	-51 to +260
E51	SI	Silicone	30/40	900	61	100	6	400	-65 to +500	-54 to +260
E85	SI	FDA Silicone	45/55	950	64	520	35	400	-60 to +500	-51 to +260
E139	SI	Silicone	60/70	1100	74	250*	17*	250	-60 to +500	-51 to +260

*Value is for 100% modulus

DISCLAIMER:

These tables are based on published data on the physical properties and material compatibility of various elastomers used for diaphragms. RPP does not guarantee their accuracy or assume responsibility for the use of these data.

