

Aerospace Seal Compounds

O-Rings	Molded Shapes	Extruded Seals	FlexiLip / FlexiSeal	Backup Rings	Composite Seals	Metal Seals	Material	Material Specification	Temperature Range (°C)	Temperature Range (°F)	Hardness (Shore A)	Comments
Acrylonitrile-Butadiene (Nitrile, Buna-N) – NBR												
X					X		N406-60	MIL-R-6855 Class 1 Grade 60	-40 / +107	-40 / +225	60	
X					X		NM506-65	AMS 7271	-57 / +82	-70 / +180	65	AS3578 part numbers
X	X ⁽¹⁾				X		N0602-70	AMS-P-5315	-57 / +82	-70 / +180	70	MS29512 & MS29513 part numbers
X					X		47-071	AMS-R-7362	-51 / +82	-60 / +180	70	MS29561 & NAS617 part numbers
X							N0287-70	AMS 7272	-37 / +121	-35 / +250	70	AS3551 part numbers
X		X			X		N0674-70	MIL-G-21569 Class 1	-34 / +121	-30 / +250	70	General purpose applications
X		X ⁽²⁾			X		N0304-75	MIL-P-25732	-54 / +121	-65 / +250	75	MS28775 part numbers
X	X ⁽¹⁾	X ⁽²⁾			X		N0756-75	AMS-R-83461	-54 / +135	-65 / +275	75	M83461 part numbers
X		X ⁽²⁾					N0507-90	MIL-P-5510	-54 / +82	-65 / +180	90	MS28778 part numbers
Ethylene Propylene Rubber – EPDM, EPM, EP, EPR												
X		X			X		E0515-80	NAS 1613 Rev 2, MIL-P-82744 (inactive)	-57 / +121	-70 / +250	80	NAS1611-xxx & NAS1612-xx part numbers
X					X		E1267-80	NAS 1613 Rev 5	-57 / +121	-70 / +250	80	NAS1611-xxxA & NAS1612-xxA part numbers
X	X	X					E0962-90	None	-51 / +121	-60 / +250	90	Suitable for steam up to 260 °C
Chloroprene Rubber (Neoprene) – CR												
		X					CB251-50	MIL-R-3065 SC410	-40 / +121	-40 / +250	50	
		X					C7025-80	MIL-R-6855 Class 2, Grade 80	-40 / +121	-40 / +250	80	
Butyl Rubber (Butyl) – IIR												
X					X		B0318-70	AMS 3238	-59 / +121	-75 / +250	70	Low gas permeation
X	X				X		B0612-70	None	-59 / +121	-75 / +250	70	Low compression set, low water vapor permeation
Fluorosilicone – FVMQ												
X	X						LM158-60	MIL-DTL-25988 Type 1 & Type 2, Class 1 Grade 60, AMS 3325	-73 / +177	-100 / +350	60	M25988/3 part numbers
		X					L7230-60	MIL-DTL-25988 Type 2 Class 1 Grade 60	-73 / +177	-100 / +350	60	
		X					LM571-60	MIL-DTL-25988 Type 2 Class 1 Grade 60	-73 / +177	-100 / +350	60	
					X		L1830-60	MIL-DTL-25988 Type 1 & Type 2, Class 1 Grade 60	-73 / +177	-100 / +350	60	
					X		1287	MIL-DTL-83528 Type D	-55 / +160	-67 / +320	70	Conductive for EMI shielding
X	X						LM159-70	MIL-DTL-25998 Type 1 & Type 2, Class 1 Grade 70	-73 / +177	-100 / +350	70	M25988/1 part numbers
		X					L7232-70	MIL-DTL-25988 Type 2 Class 1 Grade 70	-73 / +177	-100 / +350	70	
		X					L7891-70	MIL-DTL-25988 Type 2 Class 1 Grade 70	-73 / +177	-100 / +350	70	
		X					LM252-70	MIL-DTL-25988 Type 2 Class 1 Grade 70	-73 / +177	-100 / +350	70	
X							L1077-75	MIL-DTL-25988 Type 1 Class 3 Grade 75	-73 / +177	-100 / +350	75	M25988/2 part numbers
X	X						LM160-80	MIL-DTL-25988 Type 1 & Type 2, Class 1 Grade 80	-68 / +177	-90 / +350	80	M25988/4 part numbers
X							L1186-80	None	-68 / +177	-90 / +350	80	PTFE modified for improved tear strength
		X					L7235-80	MIL-DTL-25988 Type 2 Class 1 Grade 80	-73 / +177	-100 / +350	80	
Silicone – VMQ, PVMQ												
		X					S7469-50	AMS 3302	-51 / +204	-60 / +400	50	
		X					S7435-50	A-A-59588, Class 1a, 1b, Grade 50	-51 / +204	-60 / +400	50	
		X					S7429-60	AMS 3303J	-51 / +204	-60 / +400	60	
X					X		S0383-70	AMS 3337, A-A-59588 Class 1a, Grade70	-115 / +204	-175 / +400	70	Extreme low temperature silicone
X	X				X		S0455-70	None	-54 / +260	-65 / +500	70	Extreme high temperature silicone
X	X				X		S0604-70	AMS 3304, AMS 3357, MIL-G-21569 Class 2, A-A-59588 Class 2a, 2b, Grade 70	-54 / +232	-65 / +450	70	AS3582 part numbers
X					X		S1224-70	AMS 3304, AMS 3357, MIL-G-21569 Class 2, A-A-59588 Class 2a, 2b, Grade 70	-54 / +232	-65 / +450	70	AS3582 part numbers
		X					S7416-70	AMS 3304 Rev. G	-51 / +204	-60 / +400	70	
X					X		S0355-75	AMS 7267	-51 / +232	-60 / +450	75	MS9385 & MS9386 part numbers
Fluorocarbon – FKM, FPM												
X	X	X			X		VM835-75	AMS-R-83485	-40 / +204	-40 / +400	75	M83485 part numbers
X	X ⁽¹⁾	X ⁽²⁾			X		V1164-75	AMS 7276, AMS 3216	-26 / +204	-15 / +400	75	AS3208 & AS3209 part numbers
X							V1226-75	AMS 7276	-26 / +204	-15 / +400	75	AS3208 & AS3209 part numbers – dark brown color
X	X				X		V1289-75	AMS spec in draft	-46 / +204	-50 / +400	75	-40 Tg Fluorocarbon
X		X					V0747-75	MIL-R-83248 Type 1 Class 1	-26 / +204	-15 / +400	75	M83248/1 part numbers
		X					V7895-75	MIL-R-83248C Type 2 Class 1	-26 / +204	-15 / +400	75	
					X		V720-75	AMS 7276	-26 / +204	-15 / +400	75	
X	X ⁽¹⁾	X ⁽²⁾		X			V0709-90	AMS 7259, MIL-R-83248 Type 1 Class 2	-26 / +204	-15 / +400	90	AS3581 or M83248/2 part numbers
Perfluoroelastomer – FFKM, FFPM												
X	X						FF200-75	AMS 7257	-15 / +320	+5 / +608	75	Extreme low compression set, low stress relaxation
Polytetrafluoroethylene – PTFE												
			X				0301		-129 / +288	-200 / +550	58 ⁽³⁾	Graphite filled PTFE
			X				0603		-129 / +288	-200 / +550	58 ⁽³⁾	Aromatic polyester filled PTFE
			X				0502		-129 / +288	-200 / +550	60 ⁽³⁾	Carbon fiber filled PTFE
			X				0204		-157 / +302	-250 / +575	60 ⁽³⁾	Fiberglass and MoS2 filled PTFE
			X				0307		-129 / +302	-200 / +575	62 ⁽³⁾	Carbon-graphite filled PTFE
			X				0602		-129 / +302	-200 / +575	62 ⁽³⁾	Carbon and PPS filled PTFE
UltraCOMP™ Series of Engineered Thermoplastic Compounds – PEEK												
			X	X			UltraCOMP CGT		-54 / +260	-65 / +500	85 ⁽⁴⁾	Carbon/graphite/PTFE filled
			X	X			UltraCOMP HTP		-54 / +249	-65 / +480	100 ⁽⁴⁾	UltraCOMP
			X	X			UltraCOMP CF		-54 / +260	-65 / +500	104 ⁽⁴⁾	Carbon fiber filled
Metal												
						X	304 Stainl. Steel	AMS 5511	+427 max	+800 max	N/A	Specification shown is for material in “strip” form
						X	Alloy 718	AMS 5596	+649 max	+1,200 max	N/A	Specification shown is for material in “strip” form
						X	Waspaloy	AMS 5544	+871 max	+1,600 max	N/A	Specification shown is for material in “strip” form
						X	Haynes 25	AMS 5537	+1,093 max	+2,000 max	N/A	Specification shown is for material in “strip” form

(1) Pending QPL approval

(2) Extruded seals made from this compound meet the requirements of, but are not QPL listed

(3) Hardness Shore D per ASTM D2240

(4) Hardness Rockwell M per ASTM D785

Note: Composite seals include Gask-O-Seals, Integral Seals, Fastener and Fitting Seals

Additional materials are available for unique applications.