



ASTM D2000 M2 BG714 A14 B14 EF11 EF21 EO14 EO34 F17

Imperial Nitrile 90 ShA O-Rings

Nitrile / NBR / Buna-N

Nitrile (NBR) is the most cost effective and commonly available O-ring material. It is suitable for use in general engineering applications owing to its resistance to many greases and oils. This O-ring material boasts a hardness rating of 90 ShA which is beneficial in applications in which sealing pressure is high. In applications requiring resistance to temperatures of more than 90°C it is advisable to consider purchasing RS Components FKM O-rings instead.

Colour: Black

Operating temperature range: -30°C to 90°C

Physical Property	Test Method	Units	Typical Values
Hardness	ASTM D 1415	IRHD	90
Tensile Strength	ASTM D 412	MPa	18.9
Elongation	ASTM D 412	%	196
Specific Gravity	ASTM D 297	g/cm ³	1.30 ±0.05
Compression Set 22h / 200°C	ASTM D 395 B	%	10
Low Temperature Resistance / Non-brittle after 3 mins at -40°C	ASTM D 2137 - TR10	°C	Pass

Aging Property	Test Method	Time (h)	Temperature (°C)	Hardness	Tensile Strength (%)	Ultimate Elongation (%)	Volume (%)
Air	ASTM D 573	70	100	1	4	-3	-
ASTM Oil 901	ASTM D 471	70	100	1	7	0	-4
ASTM Oil 903	ASTM D 471	70	100	-3			7

Chemical resistance

- Many hydrocarbons
- Fats
- Oils & Gasoline
- Petroleum based hydraulic fluid (HFD-R)

Not compatible with:

- Ozone
- Esters
- Retones
- Aldehydes
- Chlorinated
- Nitro Hydrocarbons

RS Article Number	Millimetres (mm)				Inches (")				Nominal (Inch dimensions)		Standard Reference
	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	Cross Section	
2562149	1.42	0.12	1.52	0.08	0.055	0.004	0.059	0.003	1/16	1/16	AS568-3 and BS 1806-3
2562150	1.78	0.13	1.78	0.08	0.07	0.005	0.07	0.003	5/64	1/16	AS568-4 and BS 1806-4
2562151	2.9	0.13	1.78	0.08	0.114	0.005	0.07	0.003	7/64	1/16	AS568-6 and BS 1806-6
2562152	3.68	0.14	1.78	0.08	0.144	0.005	0.07	0.003	5/32	1/16	AS568-7 and BS 1806-7
2562153	5.28	0.15	1.78	0.08	0.207	0.005	0.07	0.003	7/32	1/16	AS568-9 and BS 1806-9
2562154	6.07	0.16	1.78	0.08	0.238	0.006	0.07	0.003	1/4	1/16	AS568-10 and BS 1806-10
2562155	7.65	0.17	1.78	0.08	0.301	0.006	0.07	0.003	5/16	1/16	AS568-11 and BS 1806-11
2562156	9.25	0.18	1.78	0.08	0.364	0.007	0.07	0.003	3/8	1/16	AS568-12 and BS 1806-12

RS Article Number	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	Cross Section	Standard Reference
2562157	10.82	0.2	1.78	0.08	0.425	0.007	0.07	0.003	7/16	1/16	AS568-13 and BS 1806-13
2562158	12.42	0.21	1.78	0.08	0.488	0.008	0.07	0.003	1/2	1/16	AS568-14 and BS 1806-14
2562159	14	0.22	1.78	0.08	0.551	0.008	0.07	0.003	35/64	1/16	AS568-15 and BS 1806-15
2562160	15.6	0.23	1.78	0.08	0.614	0.009	0.07	0.003	39/64	1/16	AS568-16 and BS 1806-16
2562161	17.17	0.24	1.78	0.08	0.675	0.009	0.07	0.003	11/16	1/16	AS568-17 and BS 1806-17
2562162	20.35	0.27	1.78	0.08	0.801	0.01	0.07	0.003	13/16	1/16	AS568-19 and BS 1806-19
2562163	21.95	0.28	1.78	0.08	0.864	0.011	0.07	0.003	7/8	1/16	AS568-20 and BS 1806-20
2562164	23.52	0.29	1.78	0.08	0.925	0.011	0.07	0.003	15/16	1/16	AS568-21 and BS 1806-21
2562251	25.12	0.3	1.78	0.08	0.988	0.011	0.07	0.003	1	1/16	AS568-22 and BS 1806-22
2562165	26.7	0.31	1.78	0.08	1.051	0.012	0.07	0.003	1 1/16	1/16	AS568-23 and BS 1806-23
2562252	29.87	0.34	1.78	0.08	1.175	0.013	0.07	0.003	1 3/16	1/16	AS568-25 and BS 1806-25
2562253	34.65	0.37	1.78	0.08	1.364	0.014	0.07	0.003	1 3/8	1/16	AS568-28 and BS 1806-28
2562254	44.17	0.44	1.78	0.08	1.738	0.017	0.07	0.003	1 3/4	1/16	AS568-31 and BS 1806-31

RS Article Number	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	Cross Section	Standard Reference
2562255	50.52	0.48	1.78	0.08	1.988	0.018	0.07	0.003	2	1/16	AS568-33 and BS 1806-33
2562180	72.75	0.64	1.78	0.08	2.864	0.025	0.07	0.003	2 7/8	1/16	AS568-40 and BS 1806-40
2562181	82.27	0.7	1.78	0.08	3.238	0.027	0.07	0.003	3 1/4	1/16	AS568-42 and BS 1806-42
2562270	94.97	0.79	1.78	0.08	3.738	0.031	0.07	0.003	3 3/4	1/16	AS568-44 and BS 1806-44
2562166	7.59	0.17	2.62	0.09	0.298	0.006	0.103	0.004	5/16	3/32	AS568-109 and BS 1806-109
2562167	10.77	0.2	2.62	0.09	0.424	0.007	0.103	0.004	7/16	3/32	AS568-111 and BS 1806-111
2562168	13.94	0.22	2.62	0.09	0.548	0.008	0.103	0.004	9/16	3/32	AS568-113 and BS 1806-113
2562169	15.54	0.23	2.62	0.09	0.611	0.009	0.103	0.004	5/8	3/32	AS568-114 and BS 1806-114
2562256	18.72	0.26	2.62	0.09	0.737	0.01	0.103	0.004	3/4	3/32	AS568-116 and BS 1806-116
2562257	23.47	0.29	2.62	0.09	0.924	0.011	0.103	0.004	15/16	3/32	AS568-119 and BS 1806-119
2562258	25.07	0.3	2.62	0.09	0.987	0.011	0.103	0.004	1	3/32	AS568-120 and BS 1806-120
2562259	28.24	0.33	2.62	0.09	1.111	0.012	0.103	0.004	1 1/8	3/32	AS568-122 and BS 1806-122
2562260	29.82	0.34	2.62	0.09	1.174	0.013	0.103	0.004	1 3/16	3/32	AS568-123 and BS 1806-123

RS Article Number	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	Cross Section	Standard Reference
2562261	32.99	0.36	2.62	0.09	1.298	0.014	0.103	0.004	1 5/16	3/32	AS568-125 and BS 1806-125
2562262	37.77	0.4	2.62	0.09	1.487	0.015	0.103	0.004	1 31/64	3/32	AS568-128 and BS 1806-128
2562199	39.34	0.4	2.62	0.09	1.548	0.015	0.103	0.004	1 9/16	3/32	AS568-129 and BS 1806-129
2562200	47.29	0.46	2.62	0.09	1.861	0.018	0.103	0.004	1 7/8	3/32	AS568-134 and BS 1806-134
2562201	50.47	0.48	2.62	0.09	1.987	0.018	0.103	0.004	2	3/32	AS568-136 and BS 1806-136
2562202	52.07	0.49	2.62	0.09	2.05	0.019	0.103	0.004	2 1/16	3/32	AS568-137 and BS 1806-137
2562182	53.64	0.51	2.62	0.09	2.111	0.02	0.103	0.004	2 1/8	3/32	AS568-138 and BS 1806-138
2562203	55.25	0.52	2.62	0.09	2.175	0.02	0.103	0.004	2 11/64	3/32	AS568-139 and BS 1806-139
2562204	56.82	0.53	2.62	0.09	2.237	0.02	0.103	0.004	2 1/4	3/32	AS568-140 and BS 1806-140
2562183	58.42	0.54	2.62	0.09	2.3	0.021	0.103	0.004	2 5/16	3/32	AS568-141 and BS 1806-141
2562185	66.34	0.59	2.62	0.09	2.611	0.023	0.103	0.004	2 39/64	3/32	AS568-146 and BS 1806-146
2562186	72.69	0.64	2.62	0.09	2.861	0.025	0.103	0.004	2 7/8	3/32	AS568-150 and BS 1806-150
2562187	75.87	0.66	2.62	0.09	2.987	0.025	0.103	0.004	3	3/32	AS568-151 and BS 1806-151

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2562271	94.92	0.79	2.62	0.09	3.737	0.031	0.103	0.004	3 3/4	3/32	AS568-154 and BS 1806-154
2562272	101.27	0.83	2.62	0.09	3.987	0.032	0.103	0.004	4	3/32	AS568-155 and BS 1806-155
2562273	107.62	0.88	2.62	0.09	4.237	0.034	0.103	0.004	4 1/4	3/32	AS568-156 and BS 1806-156
2562274	145.72	1.13	2.62	0.09	5.737	0.044	0.103	0.004	5 47/64	3/32	AS568-162 and BS 1806-162
2562209	152.07	1.17	2.62	0.09	5.987	0.046	0.103	0.004	6	3/32	AS568-163 and BS 1806-163
2562275	164.77	1.26	2.62	0.09	6.487	0.049	0.103	0.004	6 31/64	3/32	AS568-165 and BS 1806-165
2562210	190.17	1.39	2.62	0.09	7.487	0.054	0.103	0.004	7 31/64	3/32	AS568-169 and BS 1806-169
2562211	209.22	1.55	2.62	0.09	8.237	0.061	0.103	0.004	8 15/64	3/32	AS568-172 and BS 1806-172
2562170	9.12	0.18	3.53	0.1	0.359	0.007	0.138	0.004	3/8	1/8	AS568-204 and BS 1806-204
2562264	18.64	0.25	3.53	0.1	0.733	0.009	0.138	0.004	3/4	1/8	AS568-210 and BS 1806-210
2562265	23.39	0.29	3.53	0.1	0.92	0.011	0.138	0.004	15/16	1/8	AS568-213 and BS 1806-213
2562266	24.99	0.3	3.53	0.1	0.983	0.011	0.138	0.004	1	1/8	AS568-214 and BS 1806-214
2562267	26.57	0.31	3.53	0.1	1.046	0.012	0.138	0.004	1 1/16	1/8	AS568-215 and BS 1806-215

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2562205	32.92	0.36	3.53	0.1	1.296	0.014	0.138	0.004	1.3125	1/8	AS568-219 and BS 1806-219
2562188	34.52	0.37	3.53	0.1	1.359	0.014	0.138	0.004	1 3/8	1/8	AS568-220 and BS 1806-220
2562206	36.09	0.38	3.53	0.1	1.42	0.014	0.138	0.004	1 7/16	1/8	AS568-221 and BS 1806-221
2562207	37.69	0.39	3.53	0.1	1.483	0.015	0.138	0.004	1 1/2	1/8	AS568-222 and BS 1806-222
2562208	40.87	0.42	3.53	0.1	1.609	0.016	0.138	0.004	1 5/8	1/8	AS568-223 and BS 1806-223
2562189	47.22	0.46	3.53	0.1	1.859	0.018	0.138	0.004	1.875	1/8	AS568-225 and BS 1806-225
2562190	50.39	0.48	3.53	0.1	1.983	0.018	0.138	0.004	2	1/8	AS568-226 and BS 1806-226
2562191	53.57	0.51	3.53	0.1	2.109	0.02	0.138	0.004	2 1/8	1/8	AS568-227 and BS 1806-227
2562192	56.74	0.53	3.53	0.1	2.233	0.02	0.138	0.004	2 1/4	1/8	AS568-228 and BS 1806-228
2562276	82.14	0.7	3.53	0.1	3.233	0.027	0.138	0.004	3 1/4	1/8	AS568-236 and BS 1806-236
2562277	85.32	0.72	3.53	0.1	3.359	0.028	0.138	0.004	3 3/8	1/8	AS568-237 and BS 1806-237
2562278	88.49	0.75	3.53	0.1	3.483	0.029	0.138	0.004	3 1/2	1/8	AS568-238 and BS 1806-238
2562280	91.67	0.77	3.53	0.1	3.609	0.03	0.138	0.004	3 5/8	1/8	AS568-239 and BS 1806-239

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2562281	94.84	0.79	3.53	0.1	3.733	0.031	0.138	0.004	3 3/4	1/8	AS568-240 and BS 1806-240
2562282	98.02	0.81	3.53	0.1	3.859	0.031	0.138	0.004	3 7/8	1/8	AS568-241 and BS 1806-241
2562283	101.19	0.83	3.53	0.1	3.983	0.032	0.138	0.004	4	1/8	AS568-242 and BS 1806-242
2562212	110.72	0.9	3.53	0.1	4.359	0.035	0.138	0.004	4 3/8	1/8	AS568-245 and BS 1806-245
2562214	113.89	0.92	3.53	0.1	4.483	0.036	0.138	0.004	4 1/2	1/8	AS568-246 and BS 1806-246
2562215	120.24	0.96	3.53	0.1	4.733	0.037	0.138	0.004	4 47/64	1/8	AS568-248 and BS 1806-248
2562284	123.42	0.98	3.53	0.1	4.859	0.038	0.138	0.004	4 55/64	1/8	AS568-249 and BS 1806-249
2562216	132.94	1.05	3.53	0.1	5.233	0.041	0.138	0.004	5 1/4	1/8	AS568-252 and BS 1806-252
2562217	139.29	1.09	3.53	0.1	5.483	0.042	0.138	0.004	5 31/64	1/8	AS568-254 and BS 1806-254
2562218	142.47	1.11	3.53	0.1	5.609	0.043	0.138	0.004	5 39/64	1/8	AS568-255 and BS 1806-255
2562219	151.99	1.17	3.53	0.1	5.983	0.046	0.138	0.004	6	1/8	AS568-258 and BS 1806-258
2562220	183.74	1.38	3.53	0.1	7.233	0.054	0.138	0.004	7 15/64	1/8	AS568-263 and BS 1806-263
2562221	202.79	1.51	3.53	0.1	7.983	0.059	0.138	0.004	8	1/8	AS568-266 and BS 1806-266

RS Article Number	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	Cross Section	Standard Reference
2562222	209.14	1.55	3.53	0.1	8.233	0.061	0.138	0.004	8 15/64	1/8	AS568-267 and BS 1806-267
2562193	37.47	0.4	5.33	0.13	1.475	0.015	0.209	0.005	1 15/32	3/16	AS568-325 and BS 1806-325
2562286	40.64	0.41	5.33	0.13	1.6	0.016	0.209	0.005	1 19/32	3/16	AS568-326 and BS 1806-326
2562287	46.99	0.46	5.33	0.13	1.85	0.018	0.209	0.005	1 7/8	3/16	AS568-328 and BS 1806-328
2562288	50.17	0.48	5.33	0.13	1.975	0.018	0.209	0.005	1 31/32	3/16	AS568-329 and BS 1806-329
2562289	56.52	0.53	5.33	0.13	2.225	0.02	0.209	0.005	2 7/32	3/16	AS568-331 and BS 1806-331
2562290	59.69	0.55	5.33	0.13	2.35	0.021	0.209	0.005	2 11/32	3/16	AS568-332 and BS 1806-332
2562292	62.87	0.57	5.33	0.13	2.475	0.022	0.209	0.005	2 15/32	3/16	AS568-333 and BS 1806-333
2562293	66.04	0.59	5.33	0.13	2.6	0.023	0.209	0.005	2 19/32	3/16	AS568-334 and BS 1806-334
2562294	69.22	0.61	5.33	0.13	2.725	0.024	0.209	0.005	2 3/4	3/16	AS568-335 and BS 1806-335
2562295	72.39	0.64	5.33	0.13	2.85	0.025	0.209	0.005	2 27/32	3/16	AS568-336 and BS 1806-336
2562296	85.09	0.72	5.33	0.13	3.35	0.028	0.209	0.005	3 3/8	3/16	AS568-340 and BS 1806-340
2562297	91.44	0.77	5.33	0.13	3.6	0.03	0.209	0.005	3 19/32	3/16	AS568-342 and BS 1806-342

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2562223	94.62	0.79	5.33	0.13	3.725	0.031	0.209	0.005	3 23/32	3/16	AS568-343 and BS 1806-343
2562224	100.97	0.83	5.33	0.13	3.975	0.032	0.209	0.005	3 31/32	3/16	AS568-345 and BS 1806-345
2562298	104.14	0.85	5.33	0.13	4.1	0.033	0.209	0.005	4 3/32	3/16	AS568-346 and BS 1806-346
2562225	110.49	0.9	5.33	0.13	4.35	0.035	0.209	0.005	4 3/8	3/16	AS568-348 and BS 1806-348
2562226	132.72	1.05	5.33	0.13	5.225	0.041	0.209	0.005	5 7/32	3/16	AS568-355 and BS 1806-355
2562227	139.07	1.09	5.33	0.13	5.475	0.042	0.209	0.005	5 15/32	3/16	AS568-357 and BS 1806-357
2562228	151.77	1.17	5.33	0.13	5.975	0.046	0.209	0.005	5 31/32	3/16	AS568-361 and BS 1806-361
2562230	177.17	1.34	5.33	0.13	6.975	0.052	0.209	0.005	6 31/32	3/16	AS568-365 and BS 1806-365
2562231	189.87	1.42	5.33	0.13	7.475	0.055	0.209	0.005	7 1/2	3/16	AS568-367 and BS 1806-367
2562232	202.57	1.51	5.33	0.13	7.975	0.059	0.209	0.005	7 31/32	3/16	AS568-369 and BS 1806-369
2562233	215.27	1.59	5.33	0.13	8.475	0.062	0.209	0.005	8 15/32	3/16	AS568-371 and BS 1806-371
2562234	126.37	1	6.99	0.15	4.975	0.039	0.275	0.005	4 31/32	1/4	AS568-429 and BS 1806-429
2562236	132.72	1.05	6.99	0.15	5.225	0.041	0.275	0.005	5 7/32	1/4	AS568-431 and BS 1806-431

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2562237	135.89	1.07	6.99	0.15	5.35	0.042	0.275	0.005	5 17/64	1/4	AS568-432 and BS 1806-432
2562238	148.59	1.15	6.99	0.15	5.85	0.045	0.275	0.005	5 7/8	1/4	AS568-436 and BS 1806-436
2562239	151.77	1.17	6.99	0.15	5.975	0.046	0.275	0.005	5 31/32	1/4	AS568-437 and BS 1806-437
2562240	158.12	1.22	6.99	0.15	6.225	0.048	0.275	0.005	6 7/32	1/4	AS568-438 and BS 1806-438
2562242	164.47	1.26	6.99	0.15	6.475	0.049	0.275	0.005	6 15/32	1/4	AS568-439 and BS 1806-439
2562243	177.17	1.34	6.99	0.15	6.975	0.052	0.275	0.005	6 31/32	1/4	AS568-441 and BS 1806-441
2562244	189.87	1.42	6.99	0.15	7.475	0.055	0.275	0.005	7 1/2	1/4	AS568-443 and BS 1806-443
2562245	278.77	2	6.99	0.15	10.975	0.078	0.275	0.005	10 31/32	1/4	AS568-451 and BS 1806-451
2562171	11.91	0.2	2.62	0.09	0.468	0.007	0.103	0.004	15/32	3/32	BS 1806-614
2562246	79.73	0.69	5.33	0.13	3.138	0.027	0.209	0.005	3 9/64	3/16	BS 1806-620
2562247	109.54	0.88	5.33	0.13	4.312	0.034	0.209	0.005	4 5/16	3/16	BS 1806-623
2562248	159.5	1.22	6.99	0.15	6.279	0.048	0.275	0.005	6 9/32	1/4	BS 1806-627
2562299	77.5	0.67	2.62	0.09	3.051	0.026	0.103	0.004	3 3/64	3/32	BS 1806-641
2562172	3.17	0.14	1.78	0.08	0.124	0.005	0.07	0.003	1/8	1/16	BS 1806-801
2562173	4.76	0.15	1.78	0.08	0.187	0.005	0.07	0.003	3/16	1/16	BS 1806-802
2562174	7.94	0.17	1.78	0.08	0.312	0.006	0.07	0.003	5/16	1/16	BS 1806-80
2562268	20.64	0.27	2.62	0.09	0.812	0.01	0.103	0.004	13/16	3/32	BS 1806-812
2562194	39.7	0.41	3.53	0.1	1.562	0.016	0.138	0.004	1 9/16	1/8	BS 1806-824
2562195	41.28	0.42	3.53	0.1	1.625	0.016	0.138	0.004	1 5/8	1/8	BS 1806-825
2562196	44.45	0.44	3.53	0.1	1.75	0.017	0.138	0.004	1 3/4	1/8	BS 1806-827
2562300	65.1	0.59	3.53	0.1	2.562	0.023	0.138	0.004	2 9/16	1/8	BS 1806-840
2562301	68.26	0.61	3.53	0.1	2.687	0.024	0.138	0.004	2 11/16	1/8	BS 1806-842

RS Article Number	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	ID ± Tolerance	Cross Section	CS ± Tolerance	Internal Diameter	Cross Section	Standard Reference
2562249	133.35	1.05	5.33	0.13	5.25	0.041	0.209	0.005	5 1/4	3/16	BS 1806-865
2562250	187.3	1.41	6.99	0.15	7.374	0.055	0.275	0.005	7 3/8	1/4	BS 1806-882
2562175	7.65	0.17	1.63	0.08	0.301	0.006	0.064	0.003	5/16	41/64	BS 1806-90
2562176	10.52	0.19	1.83	0.08	0.414	0.007	0.072	0.003	27/64	23/32	BS 1806-905
2562177	11.89	0.2	1.98	0.08	0.468	0.007	0.077	0.003	15/32	5/64	BS 1806-906
2562179	13.46	0.22	2.08	0.08	0.529	0.008	0.081	0.003	17/32	5/64	BS 1806-907
2562269	23.47	0.29	2.95	0.09	0.924	0.011	0.116	0.004	15/16	1/8	BS 1806-912
2562197	43.69	0.44	3	0.09	1.72	0.017	0.118	0.004	1 23/32	1/8	BS 1806-924
2562198	59.36	0.55	3	0.09	2.337	0.021	0.118	0.004	2 11/32	1/8	BS 1806-932