



AEROSPACE STANDARD

AS9772™**REV. A**

Issued 1998-05
Revised 2020-01
Reaffirmed 2025-07

Superseding AS9772

(R) O-Ring Machined from AMS3617 Material

RATIONALE

This standard was transferred from E-25 to A-6 and has been revised to make its format consistent with other A-6 O-ring part standards.

AS9772A has been reaffirmed to comply with the SAE Five-Year Review policy.

FOREWORD

The initial release of this document was intended to replace Military Specification MS9772. Any part numbers established by the original specification remain unchanged.

1. SCOPE

This standard establishes the dimensional and visual quality requirements, lot requirements, and packaging and labeling requirements for O-rings machined from AMS3617 polyamide material. It shall be used for procurement purposes.

1.1 Field of Application

These O-rings have been used typically for parts requiring high strength and resistance to aircraft fuels and lubricants up to 248 °F (120 °C), but usage is not limited to such applications.

NOTE: Users should test to confirm fluid compatibility at the system's maximum operating temperature before proceeding with part performance testing.

2. APPLICABLE DOCUMENTS

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15086-7511, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AMS2817 Packaging and Identification of Molded Elastomeric Seals and Sealing Components

AMS3617 Polyamide Type 6-6, Plastic Moldings and Extrusions

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Documents

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2.2 ASQ Publications

Available from American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203, Tel: 800-248-1946 (United States or Canada), 001-800-514-1564 (Mexico), or +1-414-272-8575 (all other locations), www.asq.org.

ANSI/ASQ Z1.4 Sampling Procedures and Tables for Inspection by Attributes

2.3 ASME Publications

Available from ASME, P.O. Box 2900, 22 Law Drive, Fairfield, NJ 07007-2900, Tel: 800-843-2763 (U.S./Canada), 001-800-843-2763 (Mexico), 973-882-1170 (outside North America), www.asme.org.

ASME Y14.5 Dimensioning and Tolerancing

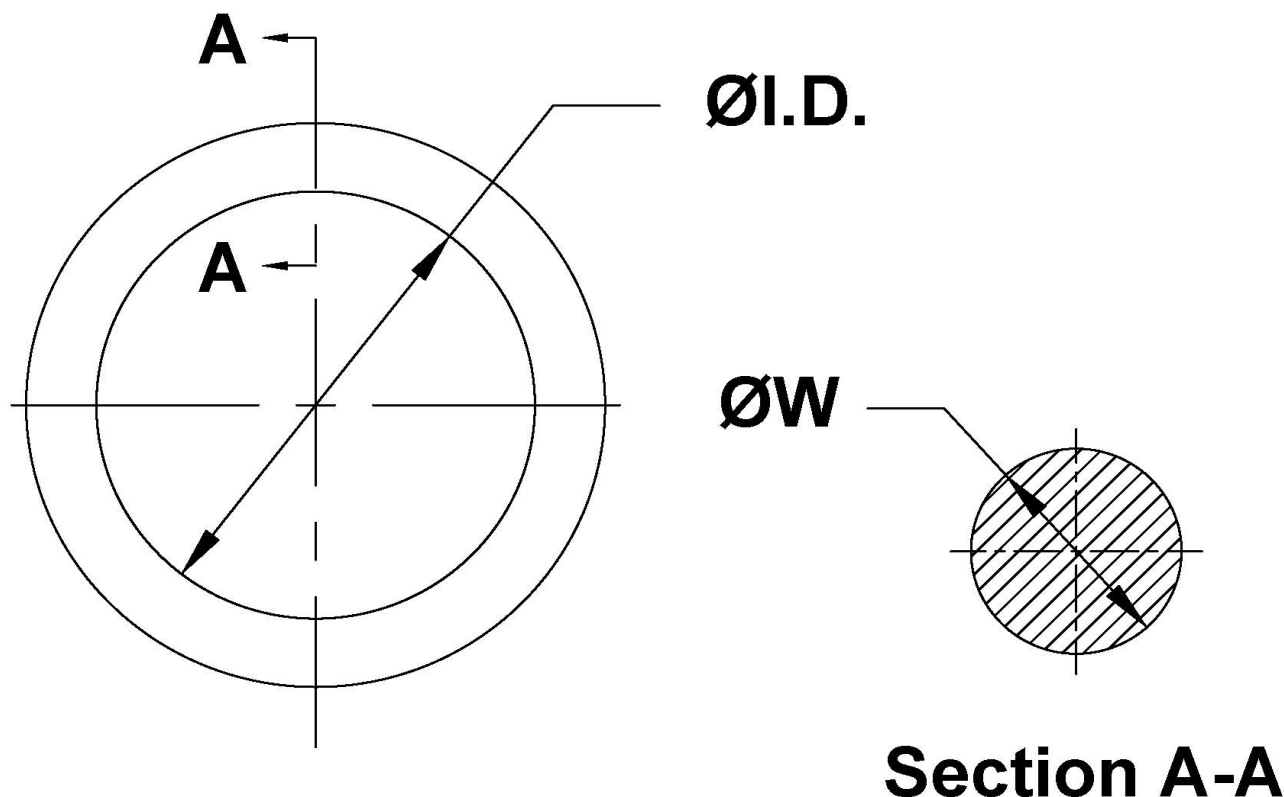
3. REQUIREMENTS

3.1 Material

The material shall be in accordance with AMS3617.

3.2 Dimensions

See Figure 1 and Table 1 for the dimensions of the O-ring for each part number.



NOTE: Dimensions and tolerancing per ASME Y14.5

Figure 1 - O-ring dimensions - width (ØW) and inside diameter (ØI.D.)

Table 1 - Part numbers and dimensions

PART NUMBER	ØI.D.	ØI.D.	ØW	ØW	APPROX MASS	
	INCHES	mm	INCHES	mm	LB/100	KG/100
MS9772-001	0.025/0.033	0.64/ 0.84	0.037/0.043	0.94/1.09	0.001	0.005
MS9772-002	0.038/0.046	0.97/ 1.17	0.047/0.053	1.19/1.35	0.003	0.001
MS9772-003	0.052/0.060	1.32/ 1.52	0.057/0.063	1.45/1.60	0.004	0.002
MS9772-004	0.065/0.075	1.65/ 1.91	0.067/0.073	1.70/1.85	0.007	0.003
MS9772-005	0.096/0.106	2.44/ 2.69	0.067/0.073	1.70/1.85	0.009	0.004
MS9772-006	0.109/0.119	2.77/ 3.02	0.067/0.073	1.70/1.85	0.009	0.004
MS9772-007	0.140/0.150	3.56/ 3.81	0.067/0.073	1.70/1.85	0.011	0.005
MS9772-008	0.171/0.181	4.34/ 4.60	0.067/0.073	1.70/1.85	0.013	0.006
MS9772-009	0.203/0.213	5.16/ 5.41	0.067/0.073	1.70/1.85	0.014	0.006
MS9772-010	0.234/0.244	5.94/ 6.20	0.067/0.073	1.70/1.85	0.016	0.007
MS9772-011	0.296/0.306	7.52/ 7.77	0.067/0.073	1.70/1.85	0.019	0.009
MS9772-012	0.359/0.369	9.12/ 9.37	0.067/0.073	1.70/1.85	0.022	0.010
MS9772-013	0.421/0.431	10.69/ 10.95	0.067/0.073	1.70/1.85	0.025	0.011
MS9772-014	0.484/0.494	12.29/ 12.55	0.067/0.073	1.70/1.85	0.029	0.013
MS9772-015	0.544/0.558	13.82/ 14.17	0.067/0.073	1.70/1.85	0.032	0.015
MS9772-016	0.605/0.623	15.37/ 15.82	0.067/0.073	1.70/1.85	0.035	0.016
MS9772-017	0.667/0.685	16.94/ 17.40	0.067/0.073	1.70/1.85	0.038	0.017
MS9772-018	0.730/0.748	18.54/ 19.00	0.067/0.073	1.70/1.85	0.041	0.019
MS9772-019	0.792/0.810	20.12/ 20.57	0.067/0.073	1.70/1.85	0.044	0.020
MS9772-020	0.855/0.873	21.72/ 22.17	0.067/0.073	1.70/1.85	0.047	0.021
MS9772-021	0.917/0.935	23.29/ 23.75	0.067/0.073	1.70/1.85	0.050	0.023
MS9772-022	0.979/0.999	24.87/ 25.37	0.067/0.073	1.70/1.85	0.054	0.024
MS9772-023	1.041/1.061	26.44/ 26.95	0.067/0.073	1.70/1.85	0.057	0.026
MS9772-024	1.104/1.124	28.04/ 28.55	0.067/0.073	1.70/1.85	0.060	0.027
MS9772-025	1.165/1.187	29.59/ 30.15	0.067/0.073	1.70/1.85	0.063	0.029
MS9772-026	1.228/1.250	31.19/ 31.75	0.067/0.073	1.70/1.85	0.066	0.030
MS9772-027	1.290/1.312	32.77/ 33.33	0.067/0.073	1.70/1.85	0.070	0.032
MS9772-028	1.351/1.377	34.32/ 34.98	0.067/0.073	1.70/1.85	0.073	0.033
MS9772-029	1.476/1.502	37.49/ 38.15	0.067/0.073	1.70/1.85	0.079	0.036
MS9772-030	1.601/1.627	40.67/ 41.33	0.067/0.073	1.70/1.85	0.086	0.039
MS9772-031	1.724/1.754	43.79/ 44.55	0.067/0.073	1.70/1.85	0.092	0.042
MS9772-032	1.849/1.879	46.97/ 47.73	0.067/0.073	1.70/1.85	0.098	0.044
MS9772-033	1.971/2.007	50.06/ 50.98	0.067/0.073	1.70/1.85	0.105	0.048
MS9772-034	2.096/2.132	53.24/ 54.15	0.067/0.073	1.70/1.85	0.111	0.050
MS9772-035	2.221/2.257	56.41/ 57.33	0.067/0.073	1.70/1.85	0.117	0.053
MS9772-036	2.346/2.382	59.59/ 60.50	0.067/0.073	1.70/1.85	0.123	0.056
MS9772-037	2.471/2.507	62.76/ 63.68	0.067/0.073	1.70/1.85	0.130	0.059
MS9772-038	2.594/2.634	65.89/ 66.90	0.067/0.073	1.70/1.85	0.136	0.062
MS9772-039	2.719/2.759	69.06/ 70.08	0.067/0.073	1.70/1.85	0.143	0.065
MS9772-040	2.844/2.884	72.24/ 73.25	0.067/0.073	1.70/1.85	0.149	0.068
MS9772-041	2.965/3.013	75.31/ 76.53	0.067/0.073	1.70/1.85	0.155	0.070
MS9772-042	3.215/3.263	81.66/ 82.88	0.067/0.073	1.70/1.85	0.168	0.076
MS9772-043	3.465/3.513	88.01/ 89.23	0.067/0.073	1.70/1.85	0.181	0.082
MS9772-044	3.712/3.766	94.29/ 95.66	0.067/0.073	1.70/1.85	0.194	0.088
MS9772-045	3.962/4.016	100.64/102.01	0.067/0.073	1.70/1.85	0.208	0.093

Table 1 - Part numbers and dimensions (continued)

PART NUMBER	ØI.D.	ØI.D.	ØW	ØW	APPROX MASS	
	INCHES	mm	INCHES	mm	LB/100	KG/100
MS9772-046	4.209/4.269	106.91/108.43	0.067/0.073	1.70/1.85	0.219	0.099
MS9772-047	4.459/4.519	113.26/114.78	0.067/0.073	1.70/1.85	0.231	0.105
MS9772-048	4.709/4.769	119.61/121.13	0.067/0.073	1.70/1.85	0.244	0.111
MS9772-049	4.952/5.026	125.78/127.66	0.067/0.073	1.70/1.85	0.257	0.117
MS9772-050	5.202/5.276	132.13/134.01	0.067/0.073	1.70/1.85	0.270	0.122
MS9772-102	0.044/0.054	1.12/ 1.37	0.100/0.106	2.54/2.69	0.017	0.008
MS9772-103	0.076/0.086	1.93/ 2.18	0.100/0.106	2.54/2.69	0.020	0.009
MS9772-104	0.107/0.117	2.72/ 2.97	0.100/0.106	2.54/2.69	0.024	0.011
MS9772-105	0.138/0.148	3.51/ 3.76	0.100/0.106	2.54/2.69	0.027	0.012
MS9772-106	0.169/0.179	4.29/ 4.55	0.100/0.106	2.54/2.69	0.031	0.014
MS9772-107	0.201/0.211	5.11/ 5.36	0.100/0.106	2.54/2.69	0.034	0.015
MS9772-108	0.232/0.242	5.89/ 6.15	0.100/0.106	2.54/2.69	0.037	0.017
MS9772-109	0.294/0.304	7.47/ 7.72	0.100/0.106	2.54/2.69	0.044	0.020
MS9772-110	0.357/0.367	9.07/ 9.32	0.100/0.106	2.54/2.69	0.051	0.023
MS9772-111	0.419/0.429	10.64/ 10.90	0.100/0.106	2.54/2.69	0.058	0.026
MS9772-112	0.482/0.492	12.24/ 12.50	0.100/0.106	2.54/2.69	0.065	0.029
MS9772-113	0.542/0.556	13.77/ 14.12	0.100/0.106	2.54/2.69	0.072	0.033
MS9772-114	0.603/0.621	15.32/ 15.77	0.100/0.106	2.54/2.69	0.079	0.036
MS9772-115	0.665/0.683	16.89/ 17.35	0.100/0.106	2.54/2.69	0.085	0.039
MS9772-116	0.728/0.746	18.49/ 18.95	0.100/0.106	2.54/2.69	0.092	0.042
MS9772-117	0.789/0.809	20.04/ 20.55	0.100/0.106	2.54/2.69	0.099	0.045
MS9772-118	0.852/0.872	21.64/ 22.15	0.100/0.106	2.54/2.69	0.106	0.048
MS9772-119	0.914/0.934	23.22/ 23.72	0.100/0.106	2.54/2.69	0.113	0.051
MS9772-120	0.977/0.997	24.82/ 25.32	0.100/0.106	2.54/2.69	0.120	0.054
MS9772-121	1.039/1.059	26.39/ 26.90	0.100/0.106	2.54/2.69	0.127	0.058
MS9772-122	1.102/1.122	27.99/ 28.50	0.100/0.106	2.54/2.69	0.134	0.061
MS9772-123	1.162/1.186	29.52/ 30.12	0.100/0.106	2.54/2.69	0.140	0.064
MS9772-124	1.225/1.249	31.12/ 31.73	0.100/0.106	2.54/2.69	0.147	0.067
MS9772-125	1.287/1.311	32.69/ 33.30	0.100/0.106	2.54/2.69	0.154	0.070
MS9772-126	1.350/1.374	34.29/ 34.90	0.100/0.106	2.54/2.69	0.161	0.073
MS9772-127	1.412/1.436	35.87/ 36.47	0.100/0.106	2.54/2.69	0.168	0.076
MS9772-128	1.475/1.499	37.47/ 38.08	0.100/0.106	2.54/2.69	0.175	0.079
MS9772-129	1.534/1.564	38.96/ 39.73	0.100/0.106	2.54/2.69	0.181	0.082
MS9772-130	1.597/1.627	40.56/ 41.33	0.100/0.106	2.54/2.69	0.189	0.086
MS9772-131	1.659/1.689	42.14/ 42.90	0.100/0.106	2.54/2.69	0.195	0.088
MS9772-132	1.722/1.752	43.74/ 44.50	0.100/0.106	2.54/2.69	0.202	0.092
MS9772-133	1.784/1.814	45.31/ 46.08	0.100/0.106	2.54/2.69	0.209	0.095
MS9772-134	1.847/1.877	46.91/ 47.68	0.100/0.106	2.54/2.69	0.216	0.098
MS9772-135	1.908/1.942	48.46/ 49.33	0.100/0.106	2.54/2.69	0.223	0.101
MS9772-136	1.970/2.004	50.04/ 50.90	0.100/0.106	2.54/2.69	0.230	0.104
MS9772-137	2.033/2.067	51.64/ 52.50	0.100/0.106	2.54/2.69	0.237	0.108
MS9772-138	2.095/2.129	53.21/ 54.08	0.100/0.106	2.54/2.69	0.244	0.111
MS9772-139	2.158/2.192	54.81/ 55.68	0.100/0.106	2.54/2.69	0.250	0.113
MS9772-140	2.220/2.254	56.39/ 57.25	0.100/0.106	2.54/2.69	0.257	0.117
MS9772-141	2.280/2.320	57.91/ 58.93	0.100/0.106	2.54/2.69	0.264	0.120
MS9772-142	2.342/2.382	59.49/ 60.50	0.100/0.106	2.54/2.69	0.271	0.123
MS9772-143	2.405/2.445	61.09/ 62.10	0.100/0.106	2.54/2.69	0.278	0.126
MS9772-144	2.467/2.507	62.66/ 63.68	0.100/0.106	2.54/2.69	0.285	0.129
MS9772-145	2.530/2.570	64.26/ 65.28	0.100/0.106	2.54/2.69	0.291	0.132