

INCH-POUND

A-A-59561

23 June 2000

SUPERSEDING

MIL-S-70334/1

27 February 1987

COMMERCIAL ITEM DESCRIPTION**SHIM, SOLID, ROUND**

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. **SCOPE.** This commercial item description (CID) establishes the government acquisition requirements for shims to be used for maintaining a predetermined distance between two surfaces.
2. **CLASSIFICATION.** The shims shall be similar to that shown in figure 1 and classified by the types listed below and by the sizes listed in table I. The type and size shall be specified in the acquisition order (see 7.4(b)).

- Type I - Aluminum alloy, anodized
- Type II - Aluminum alloy, chemically treated
- Type III - Brass, black chemical finish
- Type IV - Corrosion resistant steel (cres), passivated
- Type V - Carbon steel, cadmium plated

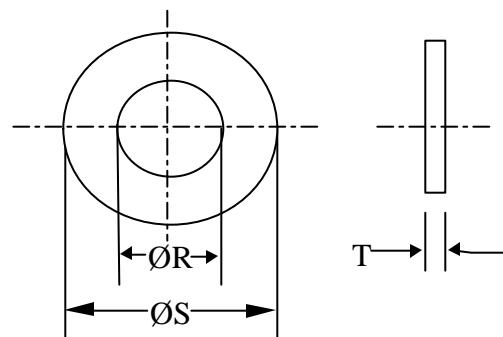


FIGURE 1. Shim, solid, round.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: Defense Supply Center Richmond (DSCR), ATTN: DSCR-VBD, 8000 Jefferson Davis Highway, Richmond, VA 23297-5610.

AMSC N/A

FSC 5365

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TABLE I. Size codes and dimensions.

Thickness (T)											
T = .001			T = .005			T = .010			T = .013		
Size	ØR	ØS	Size	ØR	ØS	Size	ØR	ØS	Size	ØR	ØS
0001	0.088	0.153	0050	0.100	0.188	0087	0.093	0.187	0140	0.128	0.315
0002	0.125	0.187	0051	0.127	0.218	0088	0.094	0.205	0141	0.199	0.305
0003	0.187	0.500	0052	0.128	0.281	0089	0.128	0.315	0142	0.320	0.425
0004	0.190	0.246	0053	0.130	0.188	0090	0.156	0.250	0143	0.502	0.750
0005	0.252	0.344	0054	0.190	0.344	0091	0.198	0.450	T = .014		
0006	0.447	0.625	0055	0.252	0.344	0092	0.199	0.305	Size	ØR	ØS
T = .002			0056	0.255	0.390	0093	0.234	0.500	0144	0.128	0.315
Size	ØR	ØS	0057	0.317	0.470	0094	0.252	0.308	0145	0.198	0.450
0007	0.128	0.250	0058	0.377	0.498	0095	0.252	0.344	0146	0.210	0.510
0008	0.130	0.188	0059	0.393	0.627	0096	0.255	0.350	0147	0.324	0.520
0009	0.200	0.400	0060	0.415	0.470	0097	0.260	0.300	0148	0.630	0.781
0010	0.250	0.359	0061	0.503	0.625	0098	0.260	0.335	0149	1.110	1.250
0011	0.250	0.748	0062	0.600	0.740	0099	0.258	0.368	T = .015		
0012	0.275	0.360	0063	0.625	0.734	0100	0.281	0.500	Size	ØR	ØS
0013	0.275	0.750	0064	0.752	1.000	0101	0.284	0.544	0150	0.128	0.315
0014	0.393	0.627	0065	0.753	0.975	0102	0.312	0.415	0151	0.187	0.250
0015	0.395	0.930	0066	1.000	1.250	0103	0.320	0.425	0152	0.235	0.290
0016	0.399	0.555	0067	1.432	1.623	0104	0.324	0.520	0153	0.265	0.500
0017	0.500	0.700	0068	1.650	1.840	0105	0.377	0.498	0154	0.380	0.625
0018	0.753	0.975	0069	2.190	2.438	0106	0.378	0.810	0155	0.520	0.660
0019	0.795	0.867	0070	3.050	3.313	0107	0.380	0.585	0156	0.750	0.990
0020	0.900	0.995	T = .006			0108	0.393	0.627	0157	0.752	1.000
0021	1.000	1.375	Size	ØR	ØS	0109	0.531	1.000	0158	1.031	1.281
0022	1.432	1.623	0071	0.200	0.510	0110	0.753	0.975	T = .016		
0023	2.190	2.438	0072	0.280	0.500	0111	0.840	1.310	Size	ØR	ØS
0024	2.435	2.873	0073	0.280	0.760	0112	1.078	1.375	0159	0.094	0.160
0025	3.050	3.313	0074	0.320	0.700	0113	1.320	2.000	0160	0.109	0.245
T = .003			0075	0.681	1.000	0114	2.182	2.750	0161	0.128	0.375
Size	ØR	ØS	0076	0.800	0.980	0115	2.190	2.438	0162	0.140	0.312
0026	0.096	0.140	0077	0.812	2.000	0116	2.435	2.873	0163	0.150	0.300
0027	0.125	0.250	0078	1.020	1.325	0117	2.515	3.225	0164	0.156	1.375
0028	0.166	0.250	0079	1.080	1.490	0118	2.598	3.313	0165	0.160	0.205
0029	0.190	0.265	0080	1.320	2.050	0119	3.050	3.313	0166	0.166	0.250
0030	0.250	0.359	0081	3.515	4.015	0120	6.000	6.250	0167	0.175	0.245
0031	0.252	0.344	T = .007			0121	10.930	12.312	0168	0.200	0.313
0032	0.313	1.000	Size	ØR	ØS	T = .011			0169	0.203	0.265
0033	0.377	0.498	0082	0.377	0.498	Size	ØR	ØS	0170	0.203	0.625
0034	0.377	0.625	0083	0.377	0.625	0122	0.128	0.315	0171	0.261	0.497
0035	0.393	0.627	T = .008			0123	0.255	0.390	0172	0.390	0.465
0036	0.415	0.470	Size	ØR	ØS	0124	0.312	0.495	0173	0.530	1.000
0037	0.570	0.875	0084	0.100	0.200	T = .012			0174	0.594	0.734
0038	0.753	0.975	0085	1.758	3.250	Size	ØR	ØS	0175	0.644	0.844
0039	1.000	1.375	0086	1.891	2.469	0125	0.128	0.250	0176	0.752	1.250
0040	1.250	1.375				0126	0.128	0.315	0177	1.202	1.310
0041	1.432	1.623				0127	0.198	0.450	0178	2.190	2.480
0042	2.190	2.438				0128	0.199	0.305			
0043	2.435	2.873				0129	0.250	0.480			
0044	3.050	3.313				0130	0.252	0.344			
T = .004						0131	0.255	0.531			
Size	ØR	ØS				0132	0.258	0.368			
0045	0.135	0.234				0133	0.320	0.425			
0046	0.170	0.360				0134	0.324	0.520			
0047	0.195	0.468				0135	0.500	0.875			
0048	0.252	0.344				0136	1.210	1.550			
0049	0.375	0.500				0137	2.002	2.490			
						0138	2.002	2.740			
						0139	3.125	3.675			

3. SALIENT CHARACTERISTICS

3.1 Tolerances. Unless otherwise specified in the acquisition order (see 7.4(c)), tolerances for the shims listed in table I shall be as shown below:

<u>Thickness</u>	<u>Outside diameter</u>
.001 to .005 - $\pm 10\%$	Up to 1" - $\pm .003$
.006 to .010 - $\pm .0005$	Over 1" up to 3" - $\pm .005$
.011 to .016 - $\pm .001$	Over 3" - $\pm .010$

3.2 Materials.

3.2.1 Type I and II shims shall be aluminum alloy 5052, temper H38, unified numbering system (UNS) A95052 in accordance with Society of Automotive Engineers (SAE) AMS QQ-A-250/8A, "Aluminum Alloy 5052, Plate and Sheet" (DoD Adopted), or with the American Society for Testing and Materials (ASTM) B 209, "Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate" (DoD Adopted).

3.2.2 Type III shims shall be brass alloy 260, temper half-hard, UNS C2600 in accordance with the ASTM B 36/B 36M, "Standard Specification for Brass Plate, Sheet, Strip, and Rolled Bar" (DoD Adopted), or with ASTM B 121/B 121M, "Standard Specification for Leaded Brass Plate, Sheet, Strip, and Rolled Bar" (DoD Adopted).

3.2.3 Type IV shims shall be corrosion resistant steel (cres) type 302, UNS S30200, temper 1/4 hard in accordance with one of the following documents:

ASTM A 240/A 240M	"Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels" (DoD Adopted).
ASTM A 666	"Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar" (DoD Adopted).
ASTM A 693	"Standard Specification for Precipitation-Hardening Stainless and Heat-Resisting Steel Plate, Sheet, Sheet, and Strip" (DoD Adopted).

3.2.4 Type V shims shall be carbon steel, grade 1010 through 1015, in accordance with ASTM A 109/A 109M, "Standard Specification for Steel, Strip, Carbon (0.25 Maximum Percent), Cold-Rolled" (DoD Adopted).

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3.3 Protective finish or surface treatment.

3.3.1 Type I shims shall be anodic coated in accordance with ASTM B 580, "Standard Specification for Anodic Oxide Coatings on Aluminum" (DoD Adopted).

3.3.2 Type II shims shall be chemically treated in accordance with MIL-C-5541, "Chemical Conversion Coatings on Aluminum and Aluminum Alloys".

3.3.3 Type III shims shall be protective finished as specified in the acquisition order (see 7.4(d)).

3.3.4 Type IV shims shall be cleaned, descaled, and passivated in accordance with ASTM A 967, "Standard Specification for Chemical Passivation Treatments for Stainless Steel Parts" (DoD Adopted).

3.3.5 Type V shims shall be cadmium plated in accordance with ASTM B 766, "Standard Specification for Electrodeposited Coatings of Cadmium" (DoD Adopted).

3.4 Surface roughness. The product shall have a maximum surface roughness of 63 microinches, determined in accordance with American Society of Mechanical Engineers (ASME) B46.1, "Surface Texture (Surface Roughness, Waviness, and Lay)" (DoD Adopted).

3.5 Cracks. The shims shall be free from cracks, flaws, and pits in any location. A crack is a clean crystalline fracture passing through or across the grain boundaries without inclusion of foreign elements.

3.6 Workmanship. The shims shall be free from surface contamination, tool marks, and other imperfections which may adversely affect usability.

4. REGULATORY REQUIREMENTS

4.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. PRODUCT CONFORMANCE PROVISIONS

5.1 Product conformance. The products provided shall meet the salient characteristics of this commercial item description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The government reserves the right to require proof of such conformance.

5.2 Market acceptability. The product offered must have been previously sold either to the government or on the commercial market.

6. PACKAGING

6.1 Preservation, packing, and marking. For acquisition purposes, the products shall be preserved, packed, and marked as specified in the acquisition order (see 7.4(e)).

7. NOTES

7.1 Sources of documents.

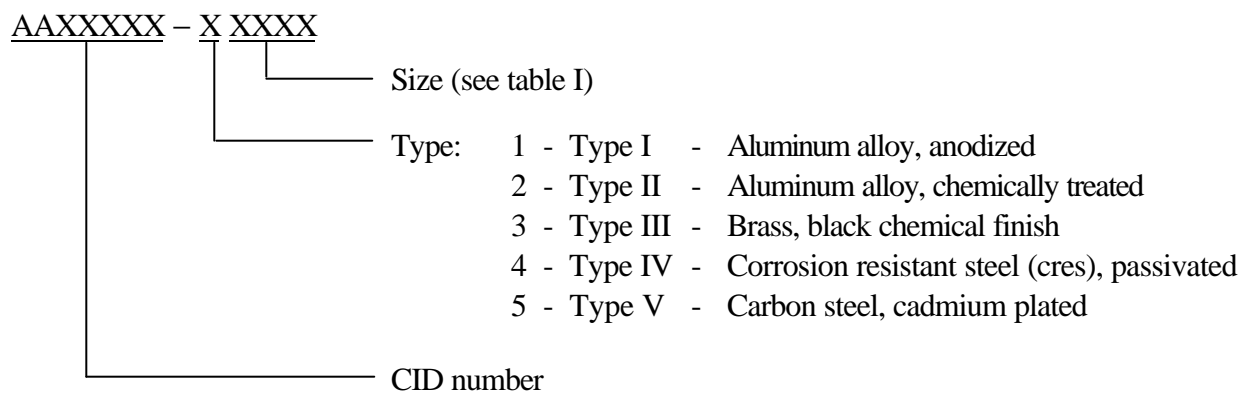
7.1.1 Government documents. Copies of the FAR and military specifications may be obtained from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328. Electronic copies of military specifications may be obtained from <http://astimage.daps.dla.mil/quicksearch/>.

7.1.2 ASME standards. Copies of ASME standards may be obtained from the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.

7.1.3 ASTM standards. Copies of ASTM standards may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

7.1.4 SAE standards. Copies of SAE standards may be obtained from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

7.2 Part or identification number (PIN). The following part or identification numbering procedure is for government purposes and does not constitute a requirement for the contractor.



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7.3 National stock number (NSN). The NSNs listed below are assigned for the listed product types and sizes (see table I). Other NSNs may also correspond with this document.

TABLE II. Assigned NSNs.

Type	Size code	NSN
IV	0002	5365-01-407-7890
IV	0004	5365-01-407-7900
IV	0008	5365-01-361-9004
IV	0017	5365-01-334-1336
IV	0028	5365-01-407-7897
IV	0037	5365-01-339-4032
IV	0053	5365-01-407-7892
IV	0090	5365-01-407-7896
IV	0125	5365-01-407-7899
IV	0151	5365-01-407-7898
IV	0157	5365-01-379-5133

7.4 Ordering data. Acquisition documents must specify the following information:

- a. CID document number, revision, and CID PIN
- b. Product type (see 2) and size (see table I)
- c. Tolerance, if different (see 3.1)
- d. Type III shim protective finish (see 3.3.3)
- e. Packaging requirements (see 6.1)

MILITARY INTERESTS:

Custodian:

Army - AR

Reviewers:

Army - AV, MI

CIVIL AGENCY
COORDINATING ACTIVITY:

GSA - 7FXE

Preparing activity:

DLA - GS

(Project 5365-0010)