

# AEROSPACE MATERIAL SPECIFICATION



AMS-P-83461/1

Issued

JUN 1999

## Packing, Preformed, Petroleum Hydraulic Fluid Resistant Improved Performance at 275°F (135°C) Sizes and Tolerances

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The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-P-83461.

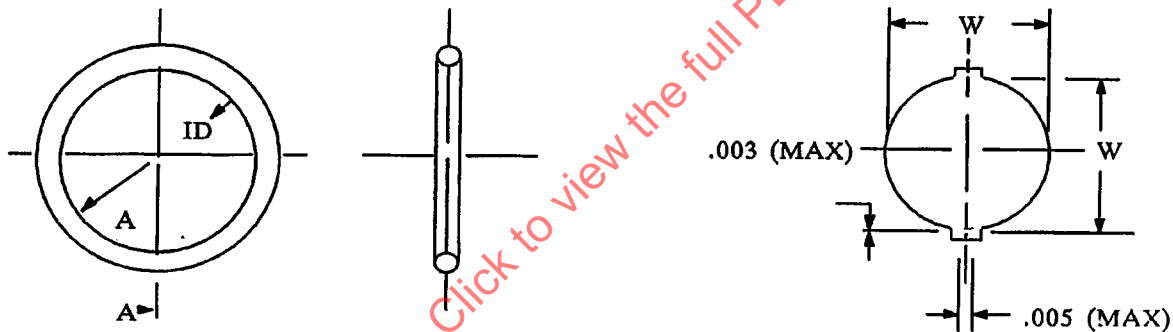
**PURPOSE:** The purpose of this specification sheet is to set up a standardized part numbering system for O-rings procured to MIL-P-83461.

#### APPLICABLE DOCUMENT

AS 568 Aerospace Size Standard for O-Rings

(Applications for copies should be addressed to Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096).

#### DIMENSIONS AND TOLERANCES



ALL DIAMETERS OF CROSS-SECTION  
SHALL EQUAL W  
SECTION A - A

**PART NUMBERS.** When this document is used for procurement of O-rings, part numbers shall consist of the following:

- The letter M and the specification sheet number.
- A dash followed by the appropriate dash number from table I or table II.

Example 1 (table I)

M83461/1-214

Example 2 (table II)

M83461/1-337

INTENDED USE: O-rings listed in table I are recommended for use in packing glands as specified in MIL-G-5514. O-rings listed in table II are the remainder of those listed in AS568, however, the applicable gland sizes for these O-rings are not specified in MIL-G-5514. The table II sizes are not recommended for hydraulic applications.

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TABLE I. Sizes listed in MIL-G-5514

DASH NO. 1/	ACTUAL SIZE				DASH NO. 1/	ACTUAL SIZE			
	WIDTH	INSIDE DIAMETER				WIDTH	INSIDE DIAMETER		
001	0.040	$\pm 0.003$	0.029	$\pm 0.004$	118	0.103	$\pm 0.003$	0.862	$\pm 0.010$
002	0.050		0.042		119			0.924	
003	0.060		0.056		120			0.987	
004	0.070	$\pm 0.003$	0.070	$\pm 0.005$	121			1.049	
005			0.101		122			1.112	
006			0.114		123			1.174	$\pm 0.012$
007			0.145		124			1.237	
008			0.176		125			1.299	
009			0.208		126			1.362	
010			0.239		127			1.424	
011			0.301		128			1.487	
012			0.364		129			1.549	$\pm 0.015$
013			0.426		130			1.612	
014			0.489		131			1.674	
015			0.551	$\pm 0.007$	132			1.737	
016			0.614	$\pm 0.009$	133			1.799	
017			0.676		134			1.862	
018			0.739		135			1.925	$\pm 0.017$
019			0.801		136			1.987	
020			0.864		137			2.050	
021			0.926		138			2.112	
022			0.989	$\pm 0.010$	139			2.175	
023			1.051		140			2.237	
024			1.114		141			2.300	$\pm 0.020$
025			1.176	$\pm 0.011$	142			2.362	
026			1.239		143			2.425	
027			1.301		144			2.487	
028			1.364	$\pm 0.013$	145			2.550	
					146			2.612	
110	0.103	$\pm 0.003$	0.362	$\pm 0.005$	147			2.675	$\pm 0.022$
111			0.424		148			2.737	
112			0.487		149			2.800	
113			0.549	$\pm 0.007$					
114			0.612	$\pm 0.009$	210	0.139	$\pm 0.004$	0.734	$\pm 0.010$
115			0.674		211			0.796	
116			0.737		212			0.859	
117			0.799	$\pm 0.010$	213			0.921	

1/ All dash numbers conform with the uniform dash system of AS568.

TABLE I. Sizes listed in MIL-G-5514 (Continued)

DASH NO. 1/	ACTUAL SIZE				DASH NO. 1/	ACTUAL SIZE			
	WIDTH		INSIDE DIAMETER			WIDTH		INSIDE DIAMETER	
214	0.139	$\pm 0.004$	0.984	$\pm 0.010$	325	0.210	$\pm 0.005$	1.475	$\pm 0.015$
215			1.046	$\downarrow$	326			1.600	$\downarrow$
216			1.109	$\pm 0.012$	327			1.725	$\downarrow$
217			1.171	$\downarrow$	328			1.850	$\downarrow$
218			1.234	$\downarrow$	329			1.975	$\pm 0.018$
219			1.296	$\downarrow$	330			2.100	$\downarrow$
220			1.359	$\downarrow$	331			2.225	$\downarrow$
221			1.421	$\downarrow$	332			2.350	$\downarrow$
222			1.484	$\pm 0.015$	333			2.475	$\pm 0.020$
223			1.609	$\downarrow$	334			2.600	$\downarrow$
224			1.734	$\downarrow$	335			2.725	$\downarrow$
225			1.859	$\pm 0.018$	336			2.850	$\downarrow$
226			1.984	$\downarrow$	337			2.975	$\pm 0.024$
227			2.109	$\downarrow$	338			3.100	$\downarrow$
228			2.234	$\pm 0.020$	339			3.225	$\downarrow$
229			2.359	$\downarrow$	340			3.350	$\downarrow$
230			2.484	$\downarrow$	341			3.475	$\downarrow$
231			2.609	$\downarrow$	342			3.600	$\pm 0.028$
232			2.734	$\pm 0.024$	343			3.725	$\downarrow$
233			2.859	$\downarrow$	344			3.850	$\downarrow$
234			2.984	$\downarrow$	345			3.975	$\downarrow$
235			3.109	$\downarrow$	346			4.100	$\downarrow$
236			3.234	$\downarrow$	347			4.225	$\pm 0.030$
237			3.359	$\downarrow$	348			4.350	$\downarrow$
238			3.484	$\downarrow$	349			4.475	$\downarrow$
239			3.609	$\pm 0.028$	425	0.275	$\pm 0.006$	4.475	$\pm 0.033$
240			3.734	$\downarrow$	426			4.600	$\downarrow$
241			3.859	$\downarrow$	427			4.725	$\downarrow$
242			3.984	$\downarrow$	428			4.850	$\downarrow$
243			4.109	$\downarrow$	429			4.975	$\pm 0.037$
244			4.234	$\pm 0.030$	430			5.100	$\downarrow$
245			4.359	$\downarrow$	431			5.225	$\downarrow$
246			4.484	$\downarrow$	432			5.350	$\downarrow$
247			4.609	$\downarrow$					

NOTE: O-ring sizes -013 through -028, -117 through -149 and -223 through -247 are intended only for use as static seals, and are not to be used in applications involving reciprocating or rotary movement.

TABLE I. Sizes listed in MIL-G-5514 (Continued)

DASH NO. 1/	ACTUAL SIZE			
	WIDTH		INSIDE DIAMETER	
433	0.275	$\pm 0.006$	5.475	$\pm 0.037$
434			5.600	
435			5.725	
436			5.850	
437			5.975	
438			6.225	$\pm 0.040$
439			6.475	
440			6.725	
441			6.975	
442			7.225	$\pm 0.045$
443			7.475	
444			7.725	
445			7.975	
446			8.475	$\pm 0.055$
447			8.975	
448			9.475	
449			9.975	
450			10.475	$\pm 0.060$
451			10.975	
452			11.475	
453			11.975	
454			12.475	
455			12.975	
456			13.475	$\pm 0.070$
457			13.975	
458			14.475	
459			14.975	
460			15.475	

TABLE I. Sizes listed in MIL-G-5514 (Continued)

DASH NO. 1/	ACTUAL SIZE				DASH NO. 1/	ACTUAL SIZE			
	WIDTH		INSIDE DIAMETER			WIDTH		INSIDE DIAMETER	
029	0.070	±0.003	1.489	±0.013	155	0.103	±0.003	3.987	±0.028
030			1.614	↓	156			4.237	±0.030
031			1.739	±0.015	157			4.487	
032			1.864	↓	158			4.737	
033			1.989	±0.018	159			4.987	±0.035
034			2.114	↓	160			5.237	
035			2.239	↓	161			5.487	
036			2.364	↓	162			5.737	
037			2.489	↓	163			5.987	
038			2.614	±0.020	164			6.237	±0.040
039			2.739	↓	165			6.487	
040			2.864	↓	166			6.737	
041			2.989	±0.024	167			6.987	
042			3.239	↓	168			7.237	±0.045
043			3.489	↓	169			7.487	
044			3.739	±0.027	170			7.737	
045			3.989	↓	171			7.987	
046			4.239	±0.030	172			8.237	±0.050
047			4.489	↓	173			8.487	
048			4.739	↓	174			8.737	
049			4.989	±0.037	175			8.987	
050			5.239	↓	176			9.237	±0.055
				↓	177			9.487	
102	0.103		0.049	±0.005	178			9.737	
103			0.081	↓					
104			0.112	↓	201	0.139	±0.004	0.171	±0.005
105			0.143	↓	202			0.234	
106			0.174	↓	203			0.296	
107			0.206	↓	204			0.359	
108			0.237	↓	205			0.421	
109			0.299	↓	206			0.484	
				↓	207			0.546	±0.007
150			2.862	±0.022	208			0.609	±0.009
151			2.987	±0.024	209			0.671	
152			3.237	↓					
153			3.487	↓	248			4.734	±0.030
154			3.737	±0.028	249			4.859	±0.035