

REV.
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SAE AS29512

FEDERAL SUPPLY CLASS
5331

RATIONALE

THIS STANDARD REPLACES MS29512 AND ADDS VISUAL QUALITY REQUIREMENTS, LOT REQUIREMENTS AND PACKAGING AND LABELING REQUIREMENTS FOR PROCUREMENT OF O-RINGS MOLDED FROM AMS-P-5315 NBR RUBBER. THE MS29512 PART NUMBERS HAVE BEEN RETAINED.

ALL DIAMETERS OF CROSS SECTION SHALL EQUAL W

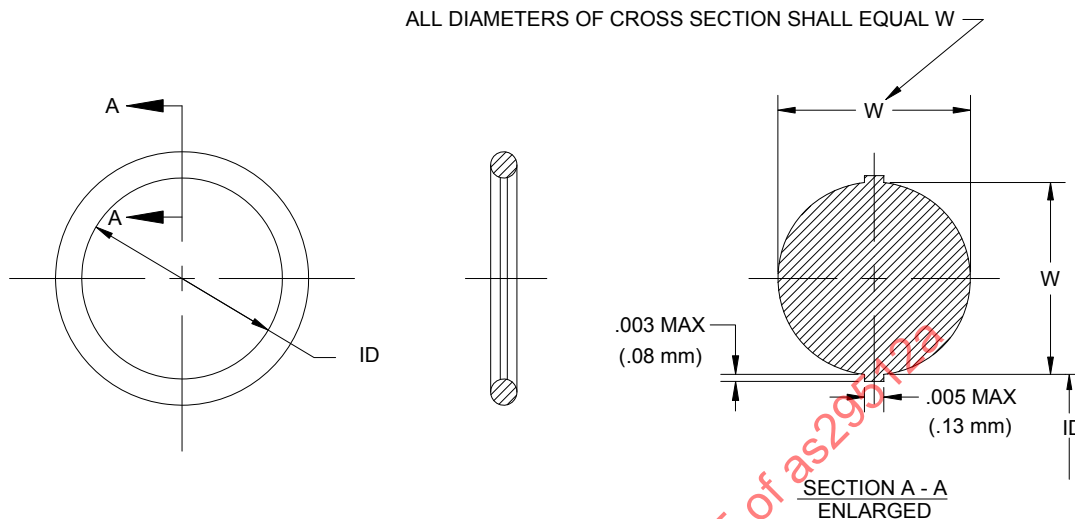


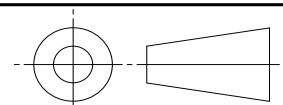
FIGURE 1 - O-RING

TABLE 1 - PART NUMBERS AND DIMENSIONS

PART NUMBER	TUBE OD (REF) IN.	TUBE OD (REF) (mm)	ID IN		ID (mm)		W DIA IN		W DIA (mm)		APPROX MASS	
			MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	LB/100	Kg/100
MS29512-01	.094	2.381	.180	.190	4.57	4.83	.053	.059	1.35	1.50	.009	.004
MS29512-02	.125	3.175	.234	.244	5.94	6.20	.061	.067	1.55	1.70	.014	.006
MS29512-03	.188	4.763	.296	.306	7.52	7.77	.061	.067	1.55	1.70	.017	.008
MS29512-04	.250	6.350	.346	.356	8.79	9.04	.069	.075	1.75	1.90	.025	.011
MS29512-05	.313	7.938	.409	.419	10.39	10.64	.069	.075	1.75	1.90	.029	.013
MS29512-06	.375	9.525	.463	.473	11.76	12.01	.075	.081	1.90	2.06	.038	.017
MS29512-07	.438	11.113	.525	.535	13.34	13.59	.079	.085	2.01	2.16	.047	.021
MS29512-08	.500	12.700	.639	.649	16.23	16.48	.084	.090	2.13	2.29	.063	.028
MS29512-09	.563	14.288	.701	.711	17.81	18.06	.094	.100	2.39	2.54	.086	.039
MS29512-10	.625	15.875	.750	.760	19.05	19.30	.094	.100	2.39	2.54	.091	.041
MS29512-11	.688	17.463	.858	.868	21.79	22.05	.112	.120	2.84	3.05	.150	.068
MS29512-12	.750	19.050	.918	.930	23.32	23.62	.112	.120	2.84	3.05	.158	.071
MS29512-13	.813	20.638	.980	.992	24.89	25.20	.112	.120	2.84	3.05	.168	.076
MS29512-14	.875	22.225	1.041	1.053	26.44	26.75	.112	.120	2.84	3.05	.178	.080
MS29512-16	1.000	25.400	1.165	1.177	29.59	29.90	.112	.120	2.84	3.05	.196	.088
MS29512-18	1.125	28.575	1.349	1.361	34.26	34.57	.112	.120	2.84	3.05	.225	.101
MS29512-20	1.250	31.750	1.465	1.485	37.21	37.72	.114	.122	2.90	3.10	.252	.113
MS29512-24	1.500	38.100	1.710	1.730	43.43	43.94	.114	.122	2.90	3.10	.290	.131
MS29512-28	1.750	44.450	2.080	2.100	52.83	53.34	.114	.122	2.90	3.10	.349	.157
MS29512-32	2.000	50.800	2.327	2.347	59.11	59.61	.114	.122	2.90	3.10	.388	.175

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS29512A>

THIRD ANGLE PROJECTION



CUSTODIAN: SAE A-6/A-6C2

PROCUREMENT SPECIFICATION: NONE

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

(R) PACKING, PREFORMED, HYDROCARBON FUEL RESISTANT, TUBE FITTING, "O" RING

SAE AS29512
SHEET 1 OF 3

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APPLICATION:

THESE O-RINGS TYPICALLY HAVE BEEN USED WHERE RESISTANCE TO FUEL IS REQUIRED, BUT USAGE IS NOT LIMITED TO SUCH APPLICATIONS. EACH APPLICATION SHOULD BE CONSIDERED SEPARATELY. THESE O-RINGS HAVE A SERVICE TEMPERATURE RANGE OF -65 TO +180°F (-54 TO +82°C).

APPLICABLE REFERENCES:

SAE PUBLICATIONS:

AVAILABLE FROM SAE INTERNATIONAL, 400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096-0001, TEL: 877-606-7323 (INSIDE USA AND CANADA) OR 724-776-4970 (OUTSIDE USA), www.sae.org.

AMS-P-5315 BUTADIENE-ACRYLONITRILE (NBR) RUBBER FOR FUEL RESISTANT SEALS 60 TO 70

AMS2817 PACKAGING AND IDENTIFICATION, PREFORMED PACKINGS

ARP5316 STORAGE OF ELASTOMERS AND SEAL ASSEMBLIES WHICH INCLUDE AN ELASTOMER ELEMENT PRIOR TO HARDWARE ASSEMBLY

ASQ PUBLICATIONS:

AVAILABLE FROM AMERICAN SOCIETY FOR QUALITY, 600 NORTH PLANKINTON AVENUE, MILWAUKEE, WI 53203 OR <http://www.asq.org>

ANSI/ASQ Z1.4 SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES

ISO PUBLICATIONS:

AVAILABLE FROM ANSI, 25 WEST 43rd STREET, NEW YORK, NY 10036 OR www.ansi.org.

ISO 3601-1 FLUID POWER SYSTEMS – O-RINGS – PART 1: INSIDE DIAMETERS, CROSS-SECTIONS, TOLERANCES AND DESIGNATION CODES

ISO 3601-3 FLUID POWER SYSTEMS – O-RINGS – PART 3: QUALITY ACCEPTANCE CRITERIA

REQUIREMENTS:

1. MATERIAL: THE MATERIAL SHALL BE IN ACCORDANCE WITH AMS-P-5315.
2. DIMENSIONAL AND VISUAL INSPECTION: PRIOR TO INSPECTION, MOLD FLASH SHALL BE REMOVED IN SUCH A MANNER THAT THE O-RINGS CONFORM TO THE REQUIREMENTS SPECIFIED HEREIN. EACH INDIVIDUAL O-RING (100%) SHALL BE VISUALLY INSPECTED ACCORDING TO ISO 3601-3, GRADE CS REQUIREMENTS WITHOUT MAGNIFICATION. THE ENTIRE O-RING SURFACE SHALL BE MANUALLY OR ELECTRONICALLY INSPECTED. IF A DEFECT IS NOTED VISUALLY, THE SIZE OF THE DEFECT CAN BE RESOLVED BY USING UP TO 2X OPTICAL MAGNIFICATION. THE SAMPLE SIZE FOR DIMENSIONAL INSPECTION SHALL BE IN ACCORDANCE WITH ANSI/ASQ Z1.4 SINGLE SAMPLING PLAN INSPECTION LEVEL II WITH AN AQL 1.0 EXCEPT THAT THE ACCEPTANCE NUMBER SHALL BE ZERO. THE SAMPLE UNIT SHALL BE ONE O-RING. THE PROCEDURES OUTLINED IN ANNEX B OF ISO 3601-1 SHALL BE FOLLOWED FOR DIMENSIONAL INSPECTION. IF THE PURCHASER REQUIRES A DIFFERENT SAMPLING PLAN OR VISUAL INSPECTION CRITERIA, PURCHASER AND MANUFACTURER SHALL AGREE PRIOR TO TIME OF ORDER.

NOTE: FOR VISUAL INSPECTION TO ISO 3601-3, GRADE CS, ONLY MANUAL INSPECTION CAN BE PERFORMED SINCE ELECTRONIC INSPECTION CANNOT ACCURATELY DISCERN THE VISUAL DEFECT LIMITS REQUIRED FOR GRADE CS.

3. LOT ACCEPTANCE: THE REQUIREMENTS ARE LISTED IN AMS-P-5315. THE LOT CERTIFICATION REPORT SHALL BE FURNISHED TO THE PURCHASER WHEN THE PRODUCT IS SHIPPED. THE MANUFACTURER OF THE O-RINGS SHALL BE RESPONSIBLE FOR THE REQUIRED INSPECTIONS AND LOT ACCEPTANCE TESTS. PURCHASER RESERVES THE RIGHT TO SAMPLE AND PERFORM ANY CONFIRMATORY INSPECTION DEEMED NECESSARY TO ENSURE THAT THE O-RINGS CONFORM TO THE SPECIFIED REQUIREMENTS.

PART NUMBER: THE O-RING PART NUMBERS ARE DESIGNATED MS29512-XX, WHERE XX INDICATES THE DASH SIZE.

 An SAE International Group	AEROSPACE STANDARD	SAE AS29512 SHEET 2 OF 3	REV. A
	(R) PACKING, PREFORMED, HYDROCARBON FUEL RESISTANT, TUBE FITTING, "O" RING		