

AS639

RATIONALE

AS639 HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

FEDERAL SUPPLY CLASS
4720

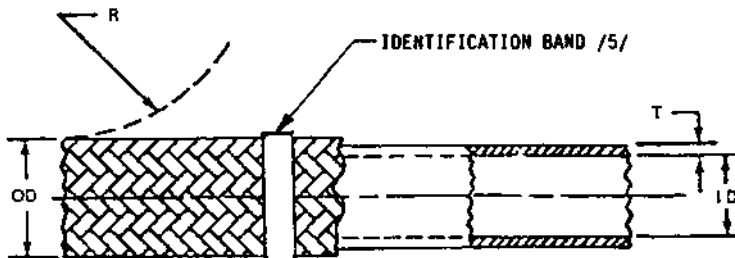


FIGURE 1 - HOSE

TABLE 1 - DIMENSIONS AND WEIGHT

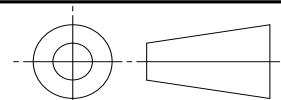
BASIC NUMBER AS639 SIZE CODE /9/	ID BRAIDED MIN	ID BRAIDED MAX	OD BRAIDED MIN	OD BRAIDED MAX	T WALL THICKNESS UNBRAIDED MIN	T WALL THICKNESS UNBRAIDED MAX	HOSE WEIGHT lb/in MAX
03	.110	.150	.234	.285	.035	.047	.005
04	.173	.203	.304	.343	.035	.047	.007
05	.235	.265	.367	.406	.035	.047	.008
06	.298	.328	.430	.469	.035	.047	.010
08	.391	.421	.546	.585	.038	.050	.013
10	.485	.515	.641	.687	.042	.054	.017
12	.615	.645	.766	.812	.042	.054	.022
16	.851	.906	1.078	1.140	.042	.054	.048
20	1.101	1.156	1.328	1.390	.045	.057	.062
24	1.344	1.406	1.637	1.707	.065	.077	.084

TABLE 2 - PERFORMANCE REQUIREMENTS (REF) /3/

BASIC NUMBER AS639 SIZE CODE /9/	OPERATING PRESSURE NEGATIVE MIN in Hg	OPERATING PRESSURE POSITIVE MAX psi	PROOF PRESSURE MIN psi	BURST PRESS - MIN ROOM TEMP psi	BURST PRESS - MIN 450 °F psi	R MIN INSIDE BEND RADIUS
03	28	1500	3000	12 000	7000	2.000
04	28	1500	3000	12 000	7000	2.000
05	28	1500	3000	10 000	6500	2.000
06	28	1500	3000	9 000	6500	4.000
08	28	1500	3000	8 000	6000	4.625
10	28	1500	3000	7 000	5500	5.500
12	20	1000	2000	5 000	3500	6.500
16	14	1250	2500	5 000	3500	7.375
20	10	1000	2000	4 000	3000	11.000
24	8	1000	2000	4 000	3000	14.000

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS639>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3D

PROCUREMENT SPECIFICATION: /3/ AS1946



AEROSPACE STANDARD

HOSE, POLYTETRAFLUOROETHYLENE,
METAL BRAID, MEDIUM PRESSURE,
HYDRAULIC, 450 °F

AS639
SHEET 1 OF 2

Documents

Copyright 2015 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Fax: 724-776-0790

Tel: +1 724-776-4970 (outside USA)
Email: CustomerService@sae.org

SAE WEB ADDRESS: <http://www.sae.org>

TABLE 3 - BRAID CONSTRUCTION

SIZE	TYPE OF REINFORCEMENT
03	SINGLE FULL COVERAGE
04	SINGLE FULL COVERAGE
05	SINGLE FULL COVERAGE
06	SINGLE FULL COVERAGE
08	SINGLE FULL COVERAGE
10	SINGLE FULL COVERAGE
12	SINGLE FULL COVERAGE
16	DOUBLE FULL COVERAGE
20	DOUBLE FULL COVERAGE
24	DOUBLE FULL COVERAGE

TABLE 4 - PERCENT OF SHIPMENT IN LENGTH RANGE SHOWN /2/

HOSE SIZE	3 TO 14 ft, INCLUSIVE	OVER 14 ft
04 TO 08, INCL	35	65
10 TO 16, INCL	45	55
20 TO 24, INCL	60	40

NOTES:

1. MATERIALS:
 - a. INNER TUBE: SEAMLESS CONSTRUCTION OF VIRGIN POLYTETRAFLUOROETHYLENE (PTFE) PER AS1946
 - b. REINFORCEMENT WIRES: 304 CRES PER AMS 5697 OR 316 CRES PER AMS 5690 OR 321 CRES PER AMS 5689
- /2/ UNLESS OTHERWISE SPECIFIED, HOSE SHALL BE FURNISHED IN LENGTHS AS INDICATED IN TABLE 4 AND NOT MORE THAN 5% OF SHIPMENT SHALL BE OF 3 ft LENGTHS.
- /3/ PERFORMANCE AND CONSTRUCTION: THE HOSE WHEN ASSEMBLED WITH END FITTINGS SHALL MEET THE PERFORMANCE REQUIREMENTS OF AS1946 AND HOSE CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE PARTS OF AS1946. MIL-H-27267 IS CONSIDERED DIMENSIONALLY EQUIVALENT TO AS639. PERFORMANCE OF AS639 HOSE IN ASSEMBLIES PER AS1946 IS EQUIVALENT TO MIL-H-25579.
4. TESTING: PTFE INNER TUBE SHALL BE TESTED IN ACCORDANCE WITH 3.4 OF AS1946 AND EACH LENGTH OF BRAIDED HOSE SHALL BE PROOF PRESSURE TESTED IN ACCORDANCE WITH 3.5 OF AS1946.
- /5/ MARKING: THE HOSE SHALL BE MARKED FOR IDENTIFICATION IN ACCORDANCE WITH MIL-STD-130. METAL OR PLIABLE PLASTIC BANDS SHALL BE PLACED AT EACH END OF THE HOSE AND AT 10 ft INTERVALS AND SHALL CONTAIN THE FOLLOWING INFORMATION.
 - a. MANUFACTURER'S NAME OR TRADEMARK.
 - b. COMPLETE AEROSPACE STANDARD AND MANUFACTURER'S PART NUMBERS.
 - c. OPERATING PRESSURE AS APPLICABLE.
 - d. DATE OF MANUFACTURE OR LOT NUMBER.
 - e. HOSE MANUFACTURER'S CAGE CODE (HANDBOOK H4/H8).
6. INTENDED USE: THIS STANDARD IS FOR THE STANDARDIZATION OF HOSE USED IN FABRICATION OF AS633 THROUGH AS638, AS647 THROUGH AS652, AND AS4006 THROUGH AS4011 TYPE HOSE ASSEMBLIES.
7. DIMENSIONING AND TOLERANCING: ANSI Y14.5M
8. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS $\pm .010$, ANGULAR DIMENSIONS $\pm 2^\circ$.
- /9/ EXAMPLE OF PART NUMBER: AS639 - 08
 BASIC NUMBER _____ NOMINAL HOSE SIZE IN SIXTEENTHS (.0625)
 (.500 DIAMETER)



AEROSPACE STANDARD

HOSE, POLYTETRAFLUOROETHYLENE,
METAL BRAID, MEDIUM PRESSURE,
HYDRAULIC, 450 °F

AS639

SHEET 2 OF 2



Documents

Document Sharing Hub