DARCO INDUSTRIES
Fire Protection & Insulation Solutions

20 Dobra Road
Yangebup WA 6164
Ph: +61 8 9418 8826
Mobile: +61 402 002 359
Email: sales@darco.com.au

TECHNICAL DATA SHEET

RED AND BLACK SILICONE FIRESLEEVES

Darco silicone coated fiberglass sleeves have an extra thick, special formulation of silicone rubber on them. Sheds molten metal splash in steel plants, glass plants, foundries, cutting and welding shops or grinding sparks and contamination. When exposed to flames the silicone rubber transforms into a crust, creating a protective SiO2 refractory layer. They also provide protection from ozone, UV and abrasion. The standard color of coating is red-oxide in stocked sizes 6 mm to 100 mm and black sleeves 8 mm to 25 mm. (Custom colors are available on indent) ***Made to AS1072 aerospace standard and NATA lab tested and certified asbestos free (ARL Job Number 11-11146).*** AS1072 printed on sleeves. See table on page to with sizes.

Application:
The perfect sleeve/ jacket choice for protecting industrial hydraulic hoses and lines, pneumatic lines, fuel & oil lines, brake lines, wires and cables from exposure to high temperature, heat, flame, fire exposure. Under hood heat protection in engine compartments, fire protection for rubber hoses, heat protection for metal tubes, fire protection for wire and cables. To obtain a neat, sealed end, use Darco Silicone self-fusing tape, DSSFTR (RED) or DSSFTB (BLACK).

Technical data	Units	Measure
Colour		**RED/BLACK**
Weave of sleeve	-	Twill
Wall thickness of sleeves	mm	2.5mm up to 3mm
Inner dia. of sleeves	mm	6 up to 150
Silicone coating thickness	mm	0.8 up to 2.2
Silicone Dielectric strength	kv/mm	≥18
Silicone Hardness	Shore A	35±5
Silicone Tensile strength	Mpa	≥4
Silicone Tearing strength	Kn/m	≥17
Temp. resistance	ºC	Continues working at 260°C, 1090°C for 15 to 20 minutes, 15 to 30 seconds exposure to 1650°C.
Installation Clearance Advice		5m+ increase ID 10% 10m+ increase ID 15% 20m+ increased ID 20%

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Sizes available in **RED**

Darco Code	PRINTING CONTENT	Darco Size/Inner Diameter	Dash Sizes	Common Held Stock or Indent
DFSR06/P	AESL-006 SAE AS1072-4	6mm	4	Stock
DFSR08/P	AESL-008 SAE AS1072-5	8mm	5	Stock
DFSR10/P	AESL-010 SAE AS1072-6	10mm	6	Stock
DFSR13/P	AESL-013 SAE AS1072-8	13mm	8	Stock
DFSR15/P	AESL-015 SAE AS1072-10	15mm	10	Stock
DFSR20/P	AESL-020 SAE AS1072-12	20mm	12	Stock
DFSR22/P	AESL-022 SAE AS1072-14	22mm	14	Stock
DFSR25/P	AESL-025 SAE AS1072-16	25mm	16	Stock
DFSR30/P	AESL-030 SAE AS1072-18	30mm	18	Indent
DFSR32/P	AESL-032 SAE AS1072-20	32mm	20	Stock
DFSR35/P	AESL-035 SAE AS1072-22	35mm	22	Indent
DFSR38/P	AESL-038 SAE AS1072-24	38mm	24	Stock
DFSR40/P	AESL-040 SAE AS1072-26	40mm	26	Stock
DFSR45/P	AESL-045 SAE AS1072-28	45mm	28	Indent
DFSR50/P	AESL-050 SAE AS1072-32	50mm	32	Stock
DFSR57/P	AESL-057 SAE AS1072-36	57mm	36	Indent
DFSR65/P	AESL-065 SAE AS1072-40	65mm	40	Stock
DFSR70/P	AESL-070 SAE AS1072-44	70mm	44	Indent
DFSR75/P	AESL-075 SAE AS1072-48	75mm	48	Stock
DFSR85/P	AESL-085 SAE AS1072-52	85mm	52	Indent
DFSR90/P	AESL-090 SAE AS1072-56	90mm	56	Stock
DFSR95/P	AESL-095 SAE AS1072-60	95mm	60	Indent
DFSR100/P	AESL-100 SAE AS1072-64	100mm	64	Indent
DFSR115/P	AESL-115 SAE AS1072-72	115mm	72	Indent
DFSR130/P	AESL-130 SAE AS1072-80	130mm	80	Indent

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TECHNICAL DATA SHEET

Sizes available in **BLACK**

Darco Code	PRINTING CONTENT	Darco Size/Inner Diameter	Dash Sizes	Common Held Stock or Indent
DFSB08/P	AESL-008 SAE AS1072-5	8mm	5	Stock
DFSB11/P	AESL-010 SAE AS1072-6	11mm	6	Stock
DFSB15/P	AESL-015 SAE AS1072-10	15mm	10	Stock
DFSB19/P	AESL-020 SAE AS1072-12	19mm	12	Stock
DFSB22/P	AESL-022 SAE AS1072-14	22mm	14	Stock
DFSB25/P	AESL-025 SAE AS1072-16	25mm	16	Stock

Note: Darco also supplies locally custom firesleeves (closed edge) or Velcro closed edge.

The Engineering Society For Advancing Mobility Land Sea Air and Space®

400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

Submitted for recognition as an American National Standard

AEROSPACE STANDARD

AS1072

Issued 1-15-76
Revised 5-17-89

REV. D

SLEEVE, HOSE ASSEMBLY, FIRE PROTECTION

1. SCOPE:

This standard defines the requirements for bulk protective sleeve to provide fire resistance for aircraft hose assemblies, which will enable these assemblies to meet the requirements of AS1055.

NOTE: Use of this sleeve does not eliminate the need to demonstrate that the sleeved assemblies will meet the applicable requirements of AS1055.

2. REQUIREMENTS:

2.1 Type:

Type 1 - Butyl Rubber Composite

Type 2 - Silicone Rubber Composite

2.2 Quality: All sleeves furnished under this standard shall comply with the requirements of AS1055 when installed on the appropriate aircraft hose assemblies.

2.2.1 When installed on the appropriate aerospace hose assembly, the cut ends of the sleeving shall be protected with material that is compatible with the cover in order to prevent wicking of fluid to the inside of sleeving.

2.3 Fluid and Temperature Resistance:

2.3.1 Butyl Rubber Composite (Type 1): The coating of the fiberglass firesleeve shall be butyl rubber with minimum 1/32 in (0.8 mm) thickness, grey or black in color, with green or silver identification markings.

2.3.1.1 Fluid Resistance: This sleeve shall be functional after exposure to the following fluids in a normal aircraft environment when tested as required in AS1055:

Phosphate ester type hydraulic fluids
MIL-H-5606 hydraulic fluid
MIL-T-5624 jet fuel
MIL-L-7808 lubricating oil
MIL-L-23699 lubricating oil
MIL-H-83282 hydraulic fluid

Caution should be used in the selection of chlorinated cleaning fluids because decomposition of chlorinated solvents can generate HCl or Cl_2 which may endanger equipment and personnel.

2.3.1.2 Temperature: The Type 1 sleeve shall be usable in the range of -65°F (-54°C) to +250°F (+120°C).

2.3.2 Silicone Rubber Composite (Type 2): The coating of the fiberglass sleeve shall be silicone rubber with minimum 1/32 in (0.8 mm) thickness, orange or brown in the color with black or white identification markings.

2.3.2.1 Fluid Resistance: This sleeve shall be functional after exposure to the following fluids in a normal aircraft environment when tested as required in AS1055:

Phosphate ester type hydraulic fluids
MIL-H-5606 hydraulic fluid
MIL-T-5624 jet fuel
MIL-L-6082 lubricating oil
MIL-L-7808 lubricating oil
MIL-L-23699 lubricating oil
MIL-H-83282 hydraulic fluid

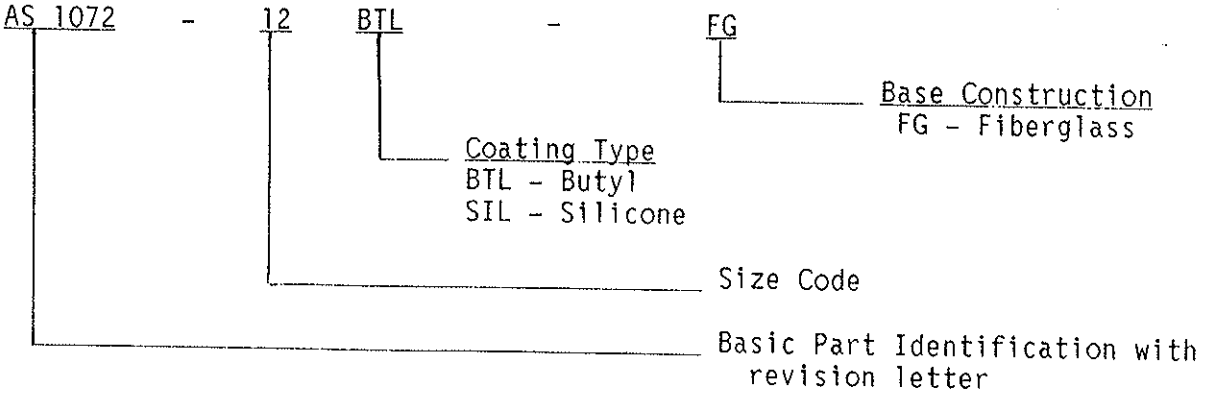
Caution should be used in the selection of chlorinated cleaning fluids because decomposition of chlorinated solvents can generate HCl or Cl_2 which may endanger equipment and personnel.

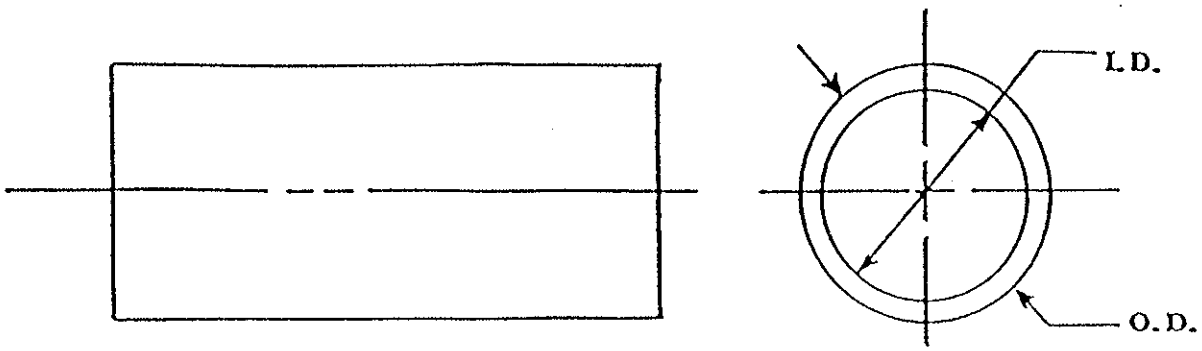
2.3.2.2 Temperature: The Type 2 sleeve shall be usable in the range of -65°F (-54°C) to +500°F (+260°C).

2.4 Asbestos: Asbestos shall not be used in the construction of these sleeves.

2.5 Identification: The sleeves shall be marked on the outer surface, on at least one layline, parallel to the bore, with AS1072, the dash number designating size, the coating description ("BTL", etc.) base construction ("FG", etc.) in 3/8 in (10 mm) high characters. The marking shall be resistant to rubbing and the fluids called out in 2.3.1.1 or 2.3.2.1. The identification strip shall be repeated every 12 in. (300 mm) or less along the entire length of the sleeve.

2.6 Example of Part Identification:





AS1072 SIZE	FIRESLEEVE Nom. I.D. In.	Nom. I.D. mm	Min. I.D. In.	Min. I.D. mm	O.D. (Max.) In.	O.D. (Max.) mm	Wt. (Max.) lb/ft	Wt. (Max.) kg/m
-04	0.25	6.4	0.21	5.3	0.56	14.2	0.08	0.12
-05	0.31	7.9	0.27	6.9	0.62	15.7	0.09	0.13
-06	0.38	9.5	0.34	8.8	0.69	17.5	0.10	0.14
-07	0.44	11.1	0.41	10.4	0.78	19.8	0.13	0.19
-08	0.50	12.7	0.46	11.7	0.84	21.3	0.14	0.20
-09	0.56	14.3	0.52	13.2	0.90	22.9	0.16	0.24
-10	0.62	15.9	0.58	14.7	0.97	24.6	0.20	0.28
-11	0.69	17.5	0.65	16.5	1.03	26.2	0.21	0.29
-12	0.75	19.0	0.71	18.0	1.09	27.7	0.22	0.32
-13	0.81	20.6	0.77	19.5	1.15	29.2	0.25	0.34
-14	0.88	22.2	0.84	21.5	1.22	31.0	0.26	0.37
-16	1.00	25.4	0.96	24.3	1.38	35.1	0.33	0.49
-18	1.12	28.6	1.08	27.4	1.50	38.1	0.35	0.52
-20	1.25	31.8	1.21	30.7	1.59	40.4	0.37	0.55
-22	1.38	34.9	1.34	34.2	1.75	44.5	0.44	0.65
-24	1.50	38.1	1.46	37.1	1.90	48.3	0.48	0.71
-25	1.56	39.7	1.53	38.9	1.87	47.5	0.36	0.50
-26	1.62	41.3	1.58	40.3	1.95	49.5	0.38	0.52
-28	1.75	44.4	1.71	43.4	2.06	52.3	0.42	0.55
-30	1.88	47.6	1.84	46.6	2.19	55.6	0.44	0.63
-32	2.00	50.8	1.96	49.8	2.32	58.9	0.48	0.71
-38	2.38	60.3	2.34	59.3	2.74	69.6	0.63	0.93
-40	2.50	63.5	2.46	62.5	2.79	70.9	0.65	0.96
-46	2.88	73.0	2.84	72.0	3.27	83.1	0.77	1.14
-48	3.00	76.2	2.96	75.2	3.40	86.4	0.87	1.29
-56	3.50	88.9	3.46	87.9	3.90	99.1	1.02	1.51
-60	3.75	95.2	3.71	94.2	4.15	105.4	1.09	1.62
-72	4.50	114.3	4.46	113.3	4.90	124.5	1.32	1.96

The "dash-numbers" shown in the column under AS1072 refer to the nominal I.D. of the firesleeve in sixteenths of an inch.

Maximum O.D. of sleeve is based on ability to pass a circular ring with I.D. equal to maximum sleeve O.D. over the sleeve without binding when the sleeve is assembled on a bar or tube of nominal I.D. size.

PREPARED BY SAE SUBCOMMITTEE G-3D,
AEROSPACE HOSE OF SAE COMMITTEE G-3,
AEROSPACE FITTINGS, HOSE & TUBING ASSEMBLIES