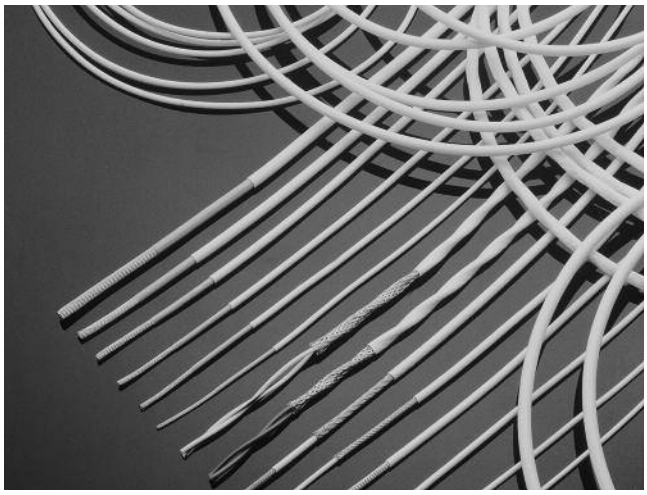
SPEC 55

Product Facts

- **Resistant to electrical arc tracking in wet or dry conditions**
- **Single or dual wall constructions**
- **Small size, ultra light weight**
- **Exceptional chemical resistance**
- **-65°C to 200°C [-85°F to 392°F]**



Applications

SPEC 55 wire is insulated with modified radiation cross-linked ETFE polymer. It has a temperature rating of -65°C to 200°C [-85°F to 392°F] continuous using a silver plated copper conductor, and combines the easy handling of a flexible wire with excellent scrape abrasion and cut-through characteristics.

The dual wall airframe construction of SPEC 55 wire is currently used on numerous aircraft programs. It has a choice of two total wall thicknesses, 0.25 [.010] (55A08XX 10 mil) and 0.2 [.008] (55A02XX 8 mil). Both have a contrasting core color to act as a damage indicator. Chosen for its balance of properties, SPEC 55 wire has outstanding resistance to chemicals and solvents, excellent electrical arc track resistance, and is not susceptible to UV and moisture degradation. Single wall equipment wire constructions are available in 0.10 [.004] (55/03XX 4 mil) and 0.15 [.006] (6 mil) wall thicknesses for use inside black boxes where flexibility and soldering iron resistance make it a wire which is very easy to install reliably.

Both single and dual wall insulated wires are available in twisted pairs, triples, etc., and as shielded and jacketed cables.

Physical Characteristics

Size and Weight

SPEC 55 wire provides one of the most comprehensive wiring product ranges for aerospace users, with a wide choice of conductor sizes and insulation wall thicknesses.The dual wall airframe wire has an insulation wall thickness of either 0.2 [.008] or 0.25 [.010] for robustness in unprotected harnesses and has excellent wire to wire abrasion properties.

The single wall equipment wire has a 0.15 [.006] wall thickness for use inside equipment and protected harnesses. For high density, interconnect wiring, the 450 volt 55M041X series of equipment wire has a nominal 0.1 [.004] wall and provides considerable weight and size savings over other comparable wires.

Handling

The excellent flexibility and handleability makes SPEC 55 the ideal wire to install, both in new aircraft and equipment and for maintenance purposes. The wire is easily stripped with conventional tooling. The insulation is readily marked by hot stamp, ink jet or laser, and can be potted without pre-etching.

SPEC 55PC Wire and Cable Insulation System

This product was originally developed to meet Boeing's material standard BMS13-48 for the 777 airliner. SPEC 55PC provides lightweight, compact insulation that matches the proven performance of our SPEC 55 wire. Today, 55PC is specified and utilized on the majority of aerospace platforms worldwide.

TE's rigorous, statistical-process-controlled manufacturing has produced wiring that is rugged and versatile enough for a wide range of commercial and defense aerospace applications, including electronic hook-ups in harsh, open airframe environments.

SPEC 55PC wire and cable systems feature an 8-mil airframe wire that is lighter and smaller than typical 10-mil wire, with little reduction in key mechanical performance features. SPEC 55PC wire offers flame resistance superior to FAA standards and also resists scrape abrasion, notch, propagation, cut-through, and electrical arc tracking.

- Meets Boeing material standard BMS 13-48.
- Exceeds FAR 25 test requirements for flame resistance and smoke density.

Available in:	
Americas	■
Europe	■
Asia Pacific	■

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

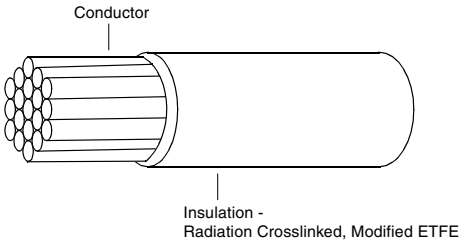
USA: +1 (800) 522-6752

Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999

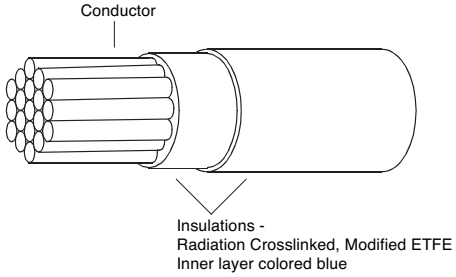
UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

Specifications



SPEC 55 Insulation System - Single Wall



SPEC 55 Insulation System - Dual Wall

SAE AS22759/32-35 and /41 to /46 and NEMA-WC-27500 (Cables)
Defense Standard 61-12 Part 33 Issue 5
Part 1001 and Part 1002
VDE 9426, 9427, 9428
British Standard 3G233
Boeing BMS 13-48
Airbus ABS 0820 to 0826
NASA preferred product list
European Space Agency 3901/012, 3901/020 and 3901/022
TE Specification 55
Civil Aviation Authority Accessory Approval E11623

Contact TE for applicable product.

Typical Properties

Temperature rating	(Tin plated conductor)	-65°C to +150°C [-85°F to +302°F]
	(Silver or nickel plated conductor)	-65°C to +200°C [-85°F to +392°F]
Thermal endurance		200 °C [392°F], 10000 h
Scrape abrasion (BS 3G233)		>100 cycles at 150°C [302°F]
Flexing endurance (Boeing BSS 7324)		>1000 cycles
Voltage rating		600 V, 1000V
Tensile strength + elongation (core only)		(Dual wall wire) 35 N/mm², 125% min.
Tensile strength + total elongation (core & primary jacket)		(Dual wall wire) 35 N/mm², 75% min.
Notch propagation BS 3G230 0.05 mm notch		Pass
Solder iron resistance (370 °C, 1 minute)		Pass
Solderability -	Tin plated copper conductor BS 3G233 conditions	<0.8 secs to wet
Shrinkage		<1%
Long term water resistance		Will not hydrolyze
Permitivity 1 KHz (ASTM D150)		2.7
Dissipation factor (ASTM D150)		0.001
FAR 25 Afterburn (sec) Burn length		~~O~~ 30 sec. max. 75 mm [3 in.] max.

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752
Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999
UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

Environmental Performance

Temperature Rating

SPEC 55 wire and cable is rated for continuous operation from -65°C to +200°C [-85°F to +392°F] and for short periods at temperatures as high as 400°C [752°F].

Mechanical Performance

Radiation crosslinking of the SPEC 55 insulation significantly improves the following mechanical characteristics; scrape (sharp edges), cross wire abrasion, cut-through resistance and creep resistance.

Solder Iron/Overload Resistance

Radiation crosslinking ensures that the insulation resists melting at high temperatures. As a result SPEC 55 wire is resistant to hot solder irons and current overloads which would melt most thermoplastic insulation.

Chemical Resistance

SPEC 55 is unaffected by all commonly used chemicals, eg. fuels, hydraulic fluids, defluxing agents, cleaners, coolants and de-icers. It also shows excellent resistance to weathering (UV, ozone, pollutants, water).

Space Wire

SPEC 55 is available in special versions suitable for use in outer space meeting both ESA and NASA requirements for outgassing.

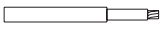
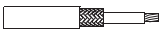
Flammability

Special additives increase the flame retardance of SPEC 55 compared to unirradiated ETFE so that it meets the latest high performance tests, eg. BS 3G230 and vertical test FAR25.

Electrical Arc Tracking Resistance

SPEC 55 insulation demonstrates resistance to arc tracking under both wet and dry conditions at aircraft system voltages.

SPEC 55 Wire & Cable: Standard Constructions, Nominal Sizes, Strandings, Diameters and Weights

Conductor	Primary Wire	Twisted Pair	Shielded & Jacketed	
			Single	Pair
				

55PC - Extra Light Weight Constructions

For applications where weight is critical, light weight tight tolerance conductors and insulation are available. These are manufactured using statistical process control methods and achieve weights that are equal or lighter than the equivalent polyimide/PTFE constructions.

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752

Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999

UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

55A - AWG Conductor: Equipment/Interconnect Wires & Cables

Wire Size (AWG)	Stranding (mm)	55A011X		55A012X	
		Nom. OD	Max. Weight (g per m/lbs per kft)	Nom. OD	Max. Weight (g per m/lbs per kft)
30	7/0.102	0.61 [0.024]	0.98 [0.66]	1.27 [0.048]	1.94 [1.3]
28	7/127	0.68 [0.027]	1.35 [0.91]	1.42 [0.054]	2.68 [1.8]
26	19/102	0.81 [0.032]	2.08 [1.4]	1.67 [0.064]	4.16 [2.8]
24	19/127	0.94 [0.037]	2.98 [2.0]	1.93 [0.074]	5.96 [4.0]
22	19/0.16	1.09 [0.043]	4.17 [2.8]	2.23 [0.086]	8.63 [5.8]
20	19/0.203	1.27 [0.050]	6.40 [4.3]	2.66 [0.102]	13.24 [8.9]
18	19/0.25	1.52 [0.060]	9.67 [6.5]	3.20 [0.122]	20.09 [13.5]
16	19/287	1.73 [0.068]	12.35 [8.3]	3.58 [0.138]	25.75 [17.3]
14	19/0.36	2.20 [0.085]	19.34 [13.0]	4.47 [0.172]	39.58 [26.6]
12	37/0.32	2.62 [0.103]	29.32 [19.7]	5.38 [0.208]	59.97 [40.3]
10	37/0.403	3.25 [0.128]	47.32 [31.8]	6.65 [0.256]	96.58 [64.9]
8	133/0.287	4.77 [0.188]	87.50 [58.8]	9.80 [0.376]	178.58 [120.0]

Wire Size (AWG)	55A111X		55A112X	
	Nom. OD	Max. Weight (g per m/lbs per kft)	Nom. OD	Max. Weight (g per m/lbs per kft)
30	1.51 [0.057]	5.06 [3.4]	2.12 [0.081]	8.03 [5.4]
28	1.59 [0.060]	5.80 [3.9]	2.27 [0.087]	9.37 [6.30]
26	1.71 [0.065]	6.85 [4.6]	2.53 [0.097]	11.75 [7.9]]
24	1.84 [0.070]	8.19 [5.5]	2.80 [0.107]	14.58 [9.8]
22	1.99 [0.076]	10.27 [6.9]	3.07 [0.119]	18.15 [12.2]
20	2.20 [0.084]	13.40 [9.0]	3.50 [0.135]	24.10 [16.2]
18	2.45 [0.094]	17.86 [12.0]	4.10 [0.155]	32.60 [21.9]
16	2.67 [0.102]	21.73 [14.6]	4.43 [0.171]	39.73 [26.7]
14	3.10 [0.119]	30.36 [20.4]	5.30 [0.205]	57.13 [38.4]
12	3.55 [0.137]	42.41 [28.5]	6.30 [0.243]	81.98 [55.1]
10	4.20 [0.161]	62.65 [42.1]	7.40 [0.291]	123.63 [83.1]
8	5.80 [0.223]	110.42 [74.2]	10.60 [0.417]	226.15 [152.0]

55A - AWG Conductor: Airframe Wires & Cables

Wire Size (AWG)	Stranding (mm)	55A081X		55A082X	
		Nom. OD	Max. Weight (g per m/lbs per kft)	Nom. OD	Max. Weight (g per m/lbs per kft)
26	19/102	1.01 [0.040]	2.5 [1.7]	2.10 [0.080]	5.06 [3.4]
24	19/127	1.14 [0.045]	3.4 [2.3]	2.33 [0.090]	6.84 [4.6]
22	19/0.16	1.27 [0.050]	4.8 [3.2]	2.64 [0.102]	9.98 [6.7]
20	19/0.203	1.47 [0.058]	7.0 [4.7]	3.07 [0.118]	14.73 [9.9]
18	19/0.25	1.78 [0.070]	10.7 [7.2]	3.63 [0.140]	21.88 [14.7]
16	19/287	1.96 [0.077]	13.4 [9.0]	4.06 [0.156]	27.53 [18.5]
14	19/0.36	2.40 [0.094]	20.5 [13.8]	4.90 [0.190]	42.26 [28.4]
12	37/0.32	2.82 [0.111]	30.5 [20.5]	5.80 [0.224]	63.00 [42.3]
10	37/0.403	3.40 [0.134]	48.3 [32.4]	7.10 [0.272]	98.96 [66.5]

Wire Size (AWG)	55A181X		55A182X	
	Nom. OD	Max. Weight (g per m/lbs per kft)	Nom. OD	Max. Weight (g per m/lbs per kft)
26	1.71 [0.073]	7.89 [5.3]	2.63 [0.113]	14.29 [9.6]
24	1.84 [0.078]	9.37 [6.3]	2.80 [0.123]	16.37 [11.0]
22	1.99 [0.084]	11.76 [7.9]	3.07 [0.135]	20.68 [13.9]
20	2.20 [0.092]	14.88 [10.0]	3.50 [0.151]	27.08[18.2]
18	2.45 [0.103]	19.79[13.3]	4.10 [0.173]	36.46 [24.5]
16	2.67 [0.111]	23.81[16.0]	4.43 [0.189]	42.86 [28.8]
14	3.10 [0.128]	33.03 [22.2]	6.30 [0.225]	61.61 [41.4]
12	3.55 [0.145]	45.09 [30.3]	6.30 [0.259]	85.42 [57.4]
10	4.20 [0.168]	66.97[45.0]	— [0.308]	127.54 [85.7]

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752
Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999
UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

55PC - AWG Conductor: Statistical Process Controlled Airframe Wires & Cables

Wire Size (AWG)	Stranding (mm)	55PC021X		55PC022X	
		Nom. OD	Target Weight (g per m/lbs per kft)	Nom. OD	Target Weight (g per m/lbs per kft)
26	19/102	0.087 [0.035]	2.05 [1.38]	—	—
24	19/127	1.00 [0.0395]	2.95 [1.98]	2.00 [0.079]	5.95 [4.00]
22	19/0.16	1.15 [0.0455]	4.31 [2.90]	2.31 [0.091]	8.74 [5.87]
20	19/0.203	1.37 [0.0540]	6.51 [4.38]	2.74 [0.108]	13.2 [8.87]
18	19/0.25	1.61 [0.0635]	9.81 [6.59]	3.22 [0.127]	19.84 [13.33]
16	19/287	1.80 [0.0710]	12.46 [8.37]	3.60 [0.142]	25.21 [16.94]
14	19/.036	2.18 [0.0860]	19.17 [12.88]	4.36 [0.172]	38.80 [26.07]
12	37/0.32	2.66 [0.1047]	29.36 [19.73]	5.30 [0.209]	59.42 [39.93]
10	37/0.403	3.27 [0.1290]	46.31 [31.12]	6.55 [0.258]	93.92 [62.99]

Wire Size (AWG)	55PC121X		55PC122X	
	Nom. OD	Target Weight (g per m/lbs per kft)	Nom. OD	Target Weight (g per m/lbs per kft)
26	1.52 [0.064]	6.54 [4.4]	2.33 [0.100]	11.34 [7.62]
24	1.65 [0.069]	7.86 [5.28]	2.89 [0.109]	13.90 [9.34]
22	1.80 [0.075]	9.81 [6.59]	2.89 [0.122]	17.89 [12.02]
20	2.00 [0.083]	12.83 [8.62]	3.30 [0.139]	23.84 [16.02]
18	2.23 [0.093]	17.01 [11.43]	3.78 [0.158]	32.10 [21.57]
16	2.44 [0.100]	20.36 [13.68]	4.16 [0.174]	39.00 [26.21]
14	2.79 [0.116]	28.69 [19.28]	4.92 [0.204]	55.21 [37.10]
12	3.30 [0.135]	40.73 [27.37]	5.92 [0.243]	80.23 [53.45]
10	3.98 [0.159]	59.90 [40.25]	7.39 [0.297]	123.65 [83.09]

X = 1 -Tin plated copper conductor.
4 -Silver plated high strength copper alloy conductor. (Recommended for size 24 & 26 in airframe applications and mandatory for CAA release.)

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752

Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999

UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

Part Numbering System 55A and 55LF — General Purpose

55 A 1 1 2 1 * - AWG - 2/6 - 9

Jacket Color (code per MIL-STD-681)
Codes same as for Primary Wire Insulation Color

Primary Wire Insulation Color (code per MIL-STD-681)

0 - Black	4 - Yellow	8 - Gray
1 - Brown	5 - Green	9 - White
2 - Red	6 - Blue	
3 - Orange	7 - Violet	

Conductor Size (AWG)

***Optional Shield Material**
H - High strength copper alloy, shield coating same as conductor coating (No designator defaults to coated "copper" shield, if any)

Conductor Type
1 - Tin-coated copper
2 - Silver-coated copper
3 - Nickel-coated copper
4 - Silver-coated high strength copper alloy
6 - Nickel-coated high strength copper alloy
A - Silver-coated ultra high-strength copper alloy

Number of Conductors
1 through 10 (designator for 10 conductor = 0)

Class of Wire
1 - 600 volt, lightweight
2 - 600 volt, medium weight
4 - 450V (55M 20-30 AWG only)
7 - 1000 volt, heavy duty, airframe
8 - 600 volt, normal weight, airframe

Constructions
0 - Primary wire; or unshielded & unjacketed cable
1 - **Round braid shielded & jacketed cable
2 - ** Flat braid shielded& jacketed cable
3 - ** Round braid shielded cable, no jacket
4 - Jacketed cable, no shield
5 - ** Spiral braid shielded & jacketed cable
6-9- Special constructions

Product Type
A - General purpose
AC- General purpose, 90% min. shield coverage
AF - General purpose, low fluoride
D - Defense Standard 61-12 Part 33
LF - General purpose, ultra low fluoride
LFC- General purpose, ultra low fluoride, 90% min. shield coverage
M - 450 Volt

Basic Product Number

Except for p/ns with Shield Material designation "H", shield coating same as conductor coating, **except:
- for Conductor Type 4, shield shall be tin-coated cooper
- for Conductor Types 6 and A, flat braid only, shield shall be tin-coated copper

The UK manufactures and supply large volumes of 55Mx4x4 (450 volt) construction wires and cables for Aerospace and Multisport applications.

Part Numbering System is a cross reference only and not meant for part creation.

Catalog 1654025
Revised 5-12
www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.
Dimensions are in millimeters unless otherwise specified.
USA: +1 (800) 522-6752
Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999
UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

Part Numbering System
55/ — Outer Space

55 / 1 3 2 1 * - AWG - 0/9 - 9

Jacket Color (code per MIL-STD-681)
Codes same as for Primary Wire Insulation Color

Primary Wire Insulation Color (code per MIL-STD-681)

0 - Black	4 - Yellow	8 - Gray
1 - Brown	5 - Green	9 - White
2 - Red	6 - Blue	
3 - Orange	7 - Violet	

Conductor Size (AWG)

***Optional Shield Material**
H - High strength copper alloy, shield coating same as conductor coating (No designator defaults to coated "copper" shield, if any)

Conductor Type
1 - Tin-coated copper
2 - Silver-coated copper
3 - Nickel-coatedcopper
4 - Silver-coated high strength copper alloy
6 - Nickel-coated high strength copper alloy
A - Silver-coated ultra high-strength copper alloy

Number of Conductors
1 thorugh 10 (designator for 10 conductor = 0)

Class of Wire
1 - 600 volt, lightweight
2 - 600 volt, medium weight
3 - 600 volt, ultra lightweight
4 - 300 volt (discontinued)
7 - 1000 volt, heavy duty
8 - 600 volt, normal weight

Constructions
0 - Primary wire; or unshielded & unjacketed cable
1 - **Round braid shielded & jacketed cable
2 - ** Flat braid shielded & jacketed cable
3 - ** Round braid shielded cable, no jacket
4 - Jacketed cable, no shield
5 - ** Spiral braid shielded & jacketed cable
6-9- Special constructions

Product Type
/ - Outer Space
/F - Outer Space, low fluoride
/LF- Outer Space, ultra low fluoride
/P - Outer Space, shield coating same as conductor coating (valid with the following conductor types only: 4 for round braid; 4, 6 or A for flat braid)

Basic Product Number

For 55/: Except for p/ns with Shield Material designation "H", shield coating same as conductor coating, **except:
- for Conductor Type 4, shield shall be tin-coated cooper; - for Conductor Types 6 and A, flat braid only, shield shall be tin-coated copper. For 55/P, /LF: Shield coating same as conductor coating.
For product released to ESCC 3901/012, 3901/020 and/or 3901/022, please refer to TE for product designation and construction.

Part Numbering System is a cross reference only and not meant for part creation.

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752
Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999
UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

Part Numbering System 55PC and 55 PLF — Process Control

55 PC 1 1 2 4 * - AWG - 2/6 - 9

Jacket Color (code per MIL-STD-681)
Codes same as for Primary Wire Insulation Color

Primary Wire Insulation Color (code per MIL-STD-681)

0 - Black	4 - Yellow	8 - Gray
1 - Brown	5 - Green	9 - White
2 - Red	6 - Blue	
3 - Orange	7 - Violet	

Conductor Size (AWG)

***Optional Shield Material**
H - High strength copper alloy, shield coating same as conductor coating (No designator defaults to coated "copper" shield, if any)

Conductor Type
1 - Tin-coated copper
2 - Silver-coated copper
3 - Nickel-coated copper
4 - Silver-coated high strength copper alloy
5 - Aluminum
6 - Nickel-coated high strength copper alloy
A - Silver-coated ultra high-strength copper alloy

Number of Conductors
1 through 10 (designator for 10 conductor = 0)
0 - 10 conductors

Class of Wire
1 - 600 volt, lightweight, general purpose, single wall
2 - 600 volt, medium weight, general purpose
5 - 600 volt, lightweight, general purpose, dual wall
7 - 1000 volt, heavy duty, airframe, general purpose
8 - 600 volt, normal weight, airframe, general purpose

Constructions
0 - Primary wire; or unshielded & unjacketed cable
1 - **Round braid screened & jacketed cable
2 - ** Flat braid screened & jacketed cable
3 - ** Round braid, screened cable, no jacket
4 - Jacketed cable, no shield
5 - ** Spiral braid shielded & jacketed cable
6-9- Special constructions

Product Type
PC - Process Control
PCF- Process Control, low fluoride
PCFL-Process Control, low fluoride (lite)
PCL - Process Control (lite)
PCT- Process Control (stripping thread under jacket, and shield, if any)
PLF - Process Control, ultra low fluoride
PLFL-Process Control, ultra low fluoride (lite)

Basic Product Number

Except for p/ns with Shield Material designation "H", shield coating same as conductor coating, **except:
For 55PCL - for conductor type 6, flat braid only, shield shall be tin-coated copper
For 55PC and 55PCT - for conductor Type 4 and A, shield shall be tin-coated cooper
for Conductor Type 6, flat braid only, shield shall be tin-coated copper

Part Numbering System is a cross reference only and not meant for part creation.

Catalog 1654025
Revised 5-12
www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.
USA: +1 (800) 522-6752

Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999
UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

Typical Ordering Example	3 conductors, red, yellow, blue, 600 volt equipment wire with overall round braid, 20 AWG tinned conductor and white jacket: total part number is 55A1131-20-2/4/6-9.
Ordering Information	A list of stock policy items can be identified by contacting TE.

SPEC 55 Part Numbering System — General

Temperature Rating	Conductor Material	AWG Range Available	Part Number	MIL-SPEC No.
600-V Lightweight Single-wall Hookup Wire, .152 [.006] Nominal Wall				
150°C [302°F]	Tin-coated copper	12–30	55A0111	M22759/32
200°C [392°F]	Silver-coated copper	12–28	55A0112	M22759/44
200°C [302°F]	Nickel-coated copper	12–28	55A0113	M22759/45
200°C [392°F]	Silver-coated high-strength alloy	20–30	55A0114	M22759/33
200°C [392°F]	Nickel-coated high-strength alloy	20–28	55A0116	M22759/46
600-V Lightweight Dual-wall Airframe Wire, .203 [.008] Nominal Wall				
150°C [302°F]	Tin-coated copper	6–26	55A0211	—
200°C [392°F]	Silver-coated copper	10–26	55A0212	—
200°C [392°F]	Nickel-coated copper	10–26	55A0213	—
200°C [392°F]	Silver-coated high-strength alloy	18–30	55A0214	—
200°C [392°F]	Nickel-coated high-strength alloy	16–26	55A0216	—
600-V Dual-wall Airframe Wire, .254 [.010] Nominal Wall				
150°C [302°F]	Tin-coated copper	00–24	55A0811	M22759/34
200°C [392°F]	Silver-coated copper	00–26	55A0812	M22759/43
200°C [392°F]	Nickel-coated copper	00–26	55A0813	M22759/41
200°C [392°F]	Silver-coated high-strength alloy	20–26	55A0814	M22759/35
200°C [392°F]	Nickel-coated high-strength alloy	20–26	55A0816	M22759/42
1000-V Medium-Weight Dual-wall Airframe Wire, .381 [.015] Nominal Wall				
150°C [302°F]	Tin-coated copper	10–24	55A0711	—
200°C [392°F]	Silver-coated copper	16–24	55A0712	—
200°C [392°F]	Nickel-coated copper	16–24	55A0713	—
200°C [392°F]	Silver-coated high-strength alloy	16–24	55A0714	—
200°C [392°F]	Nickel-coated high-strength alloy	16–26	55A0716	—

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752
Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999
UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

SPEC 55 Cable Constructions

Construction	Number of Components	Component Conductor[1]	Shield Material[1]	Part Number	
				Light Wt.[2]	Medium Wt.
Unshielded, unjacketed 	2–10	1	—	55*01X1-AWG-Y	55*08X1-AWG-Y
		2	—	55*01X2-AWG-Y	55*08X2-AWG-Y
		3	—	55*01X3-AWG-Y	55*08X3-AWG-Y
		4	—	55*01X4-AWG-Y	55*08X4-AWG-Y
		6	—	55*01X6-AWG-Y	55*48X6-AWG-Y
Unshielded, jacketed 	2–10	1	—	55*41X1-AWG-Y	55*48X1-AWG-Y
		2	—	55*41X2-AWG-Y	55*48X2-AWG-Y
		3	—	55*41X3-AWG-Y	55*48X3-AWG-Y
		4	—	55*41X4-AWG-Y	55*48X4-AWG-Y
		6	—	55*41X6-AWG-Y	55*48X6-AWG-Y
Shielded (round braid), jacketed 	1–10	1	1	55*11X1-AWG-Y	55*18X1-AWG-Y
		2	2	55*11X2-AWG-Y	55*18X2-AWG-Y
		3	3	55*11X3-AWG-Y	55*18X3-AWG-Y
		4	1	55*11X4-AWG-Y	55*18X4-AWG-Y
		6	3	55*11X6-AWG-Y	55*18X6-AWG-Y
Shielded (flat braid), jacketed 	1–10	1	1	55*21X1-AWG-Y	55*28X1-AWG-Y
		2	1	55*21X2-AWG-Y	55*28X2-AWG-Y
		3	1	55*21X3-AWG-Y	55*28X3-AWG-Y
		4	1	55*21X4-AWG-Y	55*28X4-AWG-Y
		6	1	55*21X6-AWG-Y	55*28X6-AWG-Y

[1]Type of conductor or shield material:
1 = tin-coated copper
2 = silver-coated copper
3 = nickel-coated copper
4 = silver-coated high-strength copper alloy
6 = nickel-coated high-strength copper alloy
* = A or PC

[2] X = no. of wire components
Y = color code
For complete part number, see Part Numbering System on page 9-15.

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752
Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999
UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

SPEC 55 (Continued)

NEMA WC-27500 Cable Part Numbering System

M27500 X AWG XX X X XX

Basic Specification Number

Component Wire ID/Shield Coverage Code

Shield Coverage 85%	Shield Coverage 90%	Component Wire Identification
-	C	Colored Stripes on White Wire (9/96/93/95/92/90/94/97/98/91... etc.)
A	D	Solid Color Wires (9/6/3/5/2/0/4/7/8/1...etc.)
B	E	Band Marks on Solid Colors (by AWG)
F	H	Alternate Colored Stripes (92/96/94/95/9/90/91/93/97/98...etc)
G	J	Alternate Solid Colors (2/6/4/5/9/0/1/3/7/8...etc.)
K	M	Number Marking on Solid Colors (by AWG)
L	N	Number Marking on White Wires
P	R	Band Marks on Colored Stripes (by AWG)
S	T	Band Marks on White Wires

Conductor Size (AWG)

Basic Wire Spec Code (SAE-AS-22759) and Slash Sheet

SB - 32 = 55A0111
SC - 33 = 55A0114
SD - 34 = 55A0811
for 2 AWG and larger, use 55A8039
SE - 35 = 55A0814
SM - 41 = 55A0813
for 2 AWG and larger, use 55A8595
SN - 42 = 55A0816
SP - 43 = 55A0812
for 2 AWG and larger, use 55A6089
SR - 44 = 55A0112
SS - 45 = 55A0113
ST - 46 = 55A0116

Number of Component Wires

1 through 9; 10 Components = 0

Shield Material and Style Code

U - No shield
T - Tin-coated copper, round
J - Tin-coated copper, flat
S - Silver-coated copper, round
G - Silver-coated copper, flat
N - Nickel-coated copper, round
V - Tin-coated copper, round, double shield
W - Silver-coated copper, round, double shield

Jacket Material and Style Code

00 - No jacket
23 - Single jacket crosslinked, modified ETFE, white
73 - Double jacket crosslinked, modified ETFE, white

Example: **M27500-22SB3T23 = 55A1131-22-9/96/93-9**

Tyco Electronics Part No.
Military Part No.

Part Numbering System is a cross reference only and not meant for part creation.

Catalog 1654025
Revised 5-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752

Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999

UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015