MIL-STAR™

GS22759 AEROSPACE-GRADE WIRE

MIL-STAR High-Performance Hookup Wire and Cable Glenair has branded its GS22759 high-temperature aerospace-grade wire, and GS27500 multi-conductor cables for aerospace applications, under the MIL-STAR brand. These discrete wires and cables are built in accordance with SAE specifications with a "GS" leadoff in place of both the base specification and the part number for individual slash sheets.

MIL-STAR is a high-performance, better-than-QPL discrete wire and cable specification unique to Glenair. The brand covers both protected (inside-the-box) hookup wire, high-durability open-loom wiring, and multi-conductor shielded and jacketed M27500-type cable.

M22759 single-ended hook-up wires are the industry standard for inside-the-box mil-aero environments and are optimized for size, weight, high-temperature resistance, and low flame propagation. The hundred-plus variants of AS22759 are organized by conductor material and plating, insulation type, wire gage, and single- or dual-wall.

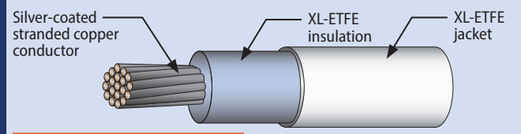
MIL-STAR™ 22759 OPEN WIRE LOOM AND (PROTECTED) HOOKUP WIRES

AS22759 high-temp single-conductor 600V military and aerospace-grade wire, standard and crosslinked, lightweight single-wall and rugged dual-wall configurations.

Crosslinked (XL) ETFE samples

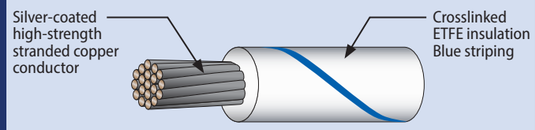
GS22759-43-22-9

- Silver-coated copper core, std. weight dual wall XL-ETFE insulation/jacket. High-temp, radiation- and fire-resistant.



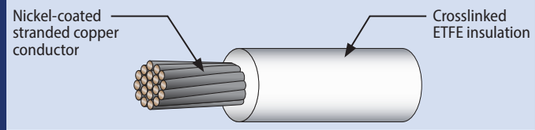
GS22759-33-24-96

- Silver-coated copper core with XL-ETFE insulation (blue striping). High-temp, low flammability.



GS22759-45-12-9 (Light weight)

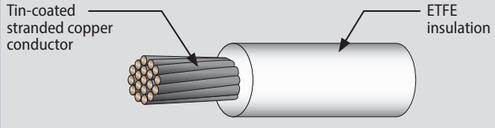
- Nickel coated copper core with XL-ETFE insulation. High-temp (200°C), fire and chemical resistant.



Conventional Fluoropolymer samples (ETFE, PTFE)

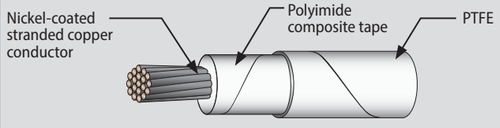
GS22759-16-8-9

- Tin-coated copper core with extruded ETFE insulation. Radiation-resistant and temperature tolerant to 150°C.



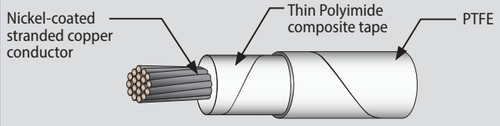
GS22759-87-20-9 (Standard weight)

- Nickel-coated copper, PTFE/Polyimide tape-wrapped. High-temp (260°C), fire and chemical-resistant, low smoke.



GS22759-92-20-9 (Light weight)

- Nickel-coated copper, PTFE/thin-wall Polyimide tape-wrapped. High-temp (260°C), fire and chemical-resistant, low smoke.



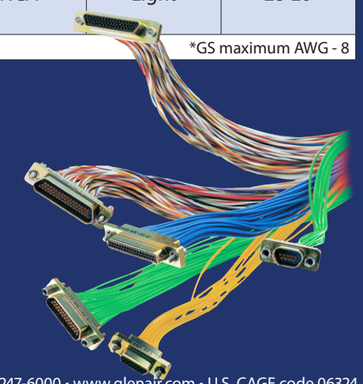
How-to-Order GS22759 Wire: MIL-STAR part numbers are easy to understand. Glenair part number structure simply replaces the MS with GS and uses a dash separator instead of a slash. The dash number (-33 for example) provides the basis for the construction including insulation type, conductor coating, voltage rating, temperature rating, and insulation thickness. Variables in the part number cover wire size, jacket color, and optional striping.

AS22759 Slash Sheet	Glenair Commercial Part No.	Temperature Rating	Conductor	Plating	Conductor Code	Weight	Conductor AWG Range
SAE AS22759/16-19, ETFE							
M22759/16	GS22759-16*	150°C	Copper	Tin	TCC	Medium	24-00
M22759/17	GS22759-17	150°C	High-Strength Copper Alloy	Silver	SCA	Medium	26-20
M22759/18	GS22759-18	150°C	Copper	Tin	TCC	Light	26-10
M22759/19	GS22759-19	150°C	High-Strength Copper Alloy	Silver	SCA	Light	26-20
SAE AS22759/32-35, XL-ETFE							
M22759/32	GS22759-32	150°C	Copper	Tin	TCC	Light	30-12
M22759/33	GS22759-33	200°C	High-Strength Copper Alloy	Silver	SCA	Light	30-20
M22759/34	GS22759-34*	150°C	Copper	Tin	TCC	Normal (Dual Wall)	24-00
M22759/35	GS22759-35	200°C	High-Strength Copper Alloy	Silver	SCA	Normal (Dual Wall)	26-20
SAE AS22759/41-46, XL-ETFE							
M22759/41	GS22759-41*	200°C	Copper	Nickel	NCC	Normal (Dual Wall)	26-00
M22759/42	GS22759-42	200°C	High-Strength Copper Alloy	Nickel	NCA	Normal (Dual Wall)	26-20
M22759/43	GS22759-43*	200°C	Copper	Silver	SCC	Normal (Dual Wall)	26-00
M22759/44	GS22759-44	200°C	Copper	Silver	SCC	Light	26-12
M22759/45	GS22759-45	200°C	Copper	Nickel	NCC	Light	28-12
M22759/46	GS22759-46	200°C	High-Strength Copper Alloy	Nickel	NCA	Light	28-20

*GS maximum AWG - 8

Interconnect Wire Assemblies: Glenair utilizes massive quantities of our own GS22759 and GS27500 wire and cable in point-to-point and complex cable assemblies. MIL-STAR wire and cable is part of a complete ecosystem of EWIS offerings from Glenair, ranging from bulk wire and cable to terminated, shielded, and overmolded assemblies built with Glenair signature connectors and accessories

From our signature 'Better-than-QPL' SuperNine series to Micro-Ds, Mighty Mouse, HiPer-D, Series 79 and others—MIL-STAR wire and cable is employed by Glenair in the delivery of value-added aerospace-grade interconnect assemblies with industry-leading speed-of-delivery.

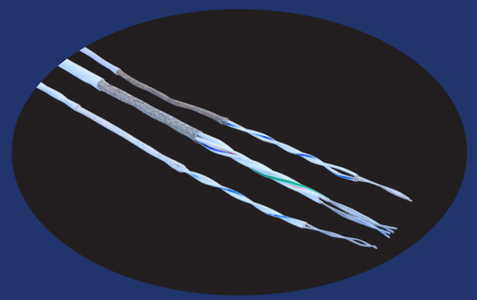


© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

MIL-STAR™

GS27500 MULTI-CONDUCTOR CABLE

Glenair MIL-STAR multi-conductor 27500 type cables are built from in-house manufactured GS22759 hookup wire, available with industry qualification as well as Glenair GS signature part numbering. GS27500 constructions for shielded and unshielded cable are:



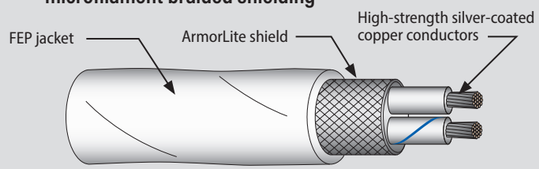
Made and tested IAW ANSI/NEMA WC 27500
1-15 22759 primary hook-up wires
Insulation types including crosslinked ETFE
Industry-standard and Glenair signature shielding materials
Standard and signature jacket compounds

MIL-STAR™ 27500 MULTI-CONDUCTOR CABLES

ANSI/NEMA WC 27500 and Glenair signature multi-conductor cables. Each series supports M22759-16 thru -46 wire types with wire count, gauge, shield, and jacket options as allowed.

968-001-24SC2AR09

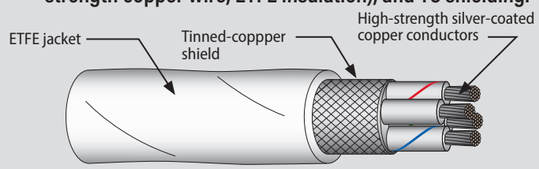
- 27500 type with ArmorLite or AmberStrand lightweight microfilament braided shielding



MIL-STAR GS27500 cables may be specified with signature braided shielding including ArmorLite, ArmorLite CF, and AmberStrand. The ability to supply 27500 type cable in accordance with the ANSI/NEMA standard but optimized for SWaP with lighter weight ArmorLite and AmberStrand shielding is a unique Glenair-only capability.

GS27500-22TF4T14

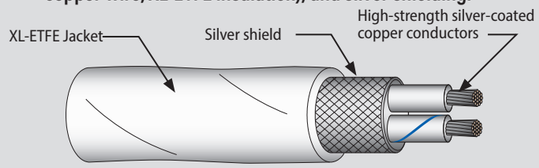
- 27500 type with GS22759-17 wire (silver-plated high-strength copper wire, ETFE insulation), and TC shielding.



This configuration of multi-conductor GS27500 cable is built with GS22759 dash 17 inner wires: silver-plated high-strength copper wire with ETFE insulation. The cable is equipped with an overall tinned-copper EMI/RFI shield and standard fluoropolymer ETFE outer jacket. The superior mechanical properties of high-strength conductors contribute to the overall safety, reliability, and mechanical strength of the cable.

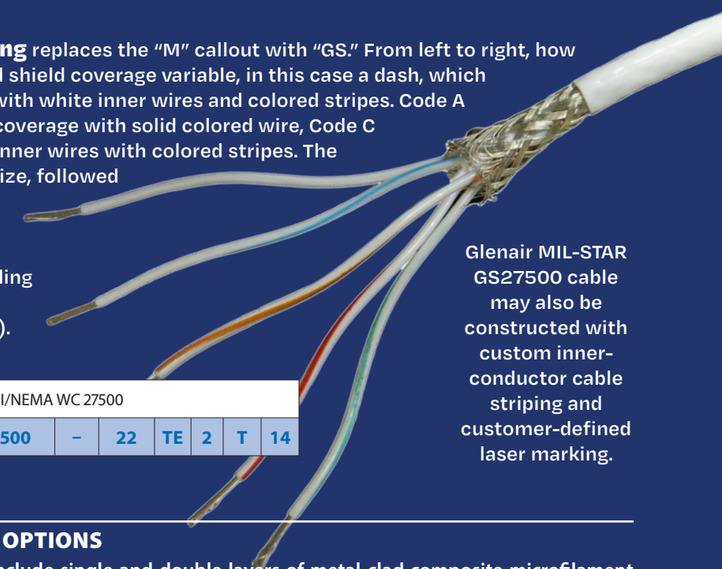
GS27500-24SC2S23

- 27500 type with GS22759-33 wire (silver-plated high-strength copper wire, XL-ETFE insulation), and silver shielding.



This cross-linked configuration of multi-conductor GS27500 cable is built with GS22759 type dash 33 inner wires: silver-plated high-strength copper wire with cross-linked XL-ETFE insulation. Cable is equipped with an overall silver-plated EMI/RFI shield and cross-linked XL-ETFE outer jacket. This multi-conductor 27500 type cable delivers far superior thermal stability, enhanced chemical resistance, mechanical strength, and electrical properties compared to non-crosslinked versions.

MIL-STAR GS27500 cable part numbering replaces the "M" callout with "GS." From left to right, how to order variables begin with the color code and shield coverage variable, in this case a dash, which indicates default 85% overall shield coverage, with white inner wires and colored stripes. Code A used in this position would denote 85% shield coverage with solid colored wire, Code C would denote 90% shield coverage with white inner wires with colored stripes. The next variable, 22 in our example, is conductor size, followed by the base wire specification (TE) indicating GS22759-16 wire is to be used in this cable buildup. Final variables include the number of inner wire conductors (2), type of overall shielding (T, for Tinned Copper), and finally jacketing material (14, indicating extruded ETFE in white).



Glenair MIL-STAR GS27500 cable may also be constructed with custom inner-conductor cable striping and customer-defined laser marking.

Multi-conductor M27500 type IAW ANSI/NEMA WC 27500							
MIL-STAR Cable Sample Part Number	GS27500	–	22	TE	2	T	14

BETTER-THAN-QPL MIL-STAR SHIELDING OPTIONS

Glenair signature braided cable shield solutions include single and double layers of metal-clad composite microfilament AmberStrand®, microfilament nickel-clad stainless steel ArmorLite™, and ArmorLite™ CF corrosion-resistant.

MIL-STAR GS27500 Shielding Options		
Single Shield Code	Double Shield Code	Shield Description
AM	AS	AmberStrand®, Round
AR	AL	ArmorLite™, Round
AC	AF	ArmorLite™ CF, Round
U	U	Unshielded

ARMORLITE™

AmberStrand®

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324