MARMON AEROSPACE & DEFENSE

680 Hayward Street, Manchester NH 03103, CAGE 61123
2584 South Horseshoe Drive, Naples FL 34104, CAGE 67050
18 Legends Drive, Hooksett NH 03106, CAGE 9JJ35
WWW.MARMON-AD.COM / 866-303-9473

Drawing Number
HTXE

Army Drawing
12293251

Product Type
Ground Vehicle Electrical Wire

Conductor:
Tin-Coated Copper

Insulation:
Irradiation Cross-linked Polyolefin

Jacket:
Irradiation Cross-linked Polyolefin

APPLICATIONS

Surprenaut HTXE wire is a rugged wire meant for use in harsh environments such as the engine compartments of armored vehicles. HTXE wire has had a long life of success, having been used since the 1980's. HTXE wire is both flexible and durable, offering a robust product with great resistance to fluids, oils, and flammability. HTXE wire meets the requirements of Army Drawing 12293251 for armored vehicle wire.

PART NUMBERING SYSTEM

Specification	-	AWG Size	Strand Count	-	Insulation Color
S-HTXE	-	16	26	-	0

**Insulation is dark grey. Jacket standard color is black.*

CONSTRUCTION

Part Number	Legacy Part Number	12293251 Cross Reference	Conductor				Finished Wire	
			AWG	Stranding	DCR Ω Max	Diameter Inches Nom	Diameter Inches	Weight lbs/kft
S-HTXE-1619-0[2]	HTXE1929UO45		16	19 x 29	4.81	0.053	0.150 ± 0.004	18
S-HTXE-1626-0[1]	HTXE2630UO45		16	26 x 30	4.69	0.055	0.150 ± 0.004	19
S-HTXE-1419-0[2]	HTXE1927UO50		14	19 x 27	3.06	0.067	0.170 ± 0.005	24
S-HTXE-1441-0[1]	HTXE4130UO50		14	41 x 30	2.94	0.073	0.175 ± 0.005	26
S-HTXE-1237-0[2]	HTXE3728UO50		12	37 x 28	2.02	0.086	0.190 ± 0.005	34
S-HTXE-1265-0[1]	HTXE6530UO50		12	65 x 30	1.85	0.086	0.190 ± 0.005	36
S-HTXE-1037-0[1]	HTXE3726UO50		10	37 x 26	1.26	0.110	0.210 ± 0.006	46
S-HTXE-10105-0[2]	HTXE10530UO50		10	105 x 30	1.12	0.116	0.215 ± 0.006	51
S-HTXE-8133-0[1]	HTXE13329UO55	12293251-1	8	133 x 29	0.701	0.163	0.280 ± 0.008	82
S-HTXE-8168-0[2]	HTXE16830UO55		8	168 x 30	0.715	0.166	0.280 ± 0.008	84
S-HTXE-6133-0[1]	HTXE13327UO55		6	133 x 27	0.445	0.205	0.325 ± 0.010	120
S-HTXE-6259-0[2]	HTXE25930UO55		6	259 x 30	0.464	0.200	0.325 ± 0.010	120

Drawn By:	Kevin Coderre	1980	Changes: Updated template. Added build parameters. Added test methods. Added 12293251 specific cross-references.
Revised By:	Kyle Coderre	04/10/2026	

Part Number	Legacy Part Number	12293251 Cross Reference	Conductor				Finished Wire	
			AWG	Stranding	DCR Ω Max	Diameter Inches Nom	Diameter Inches	Weight lbs/kft
S-HTXE-4133-0[1]	HTXE13325UO55	12293251-2	4	133 x 25	0.280	0.259	0.380 ± 0.011	180
S-HTXE-4420-0[2]	HTXE42030UO55		4	420 x 30	0.299	0.256	0.380 ± 0.011	180
S-HTXE-2665-0[1]	HTXE66530UO65		2	665 x 30	0.183	0.330	0.465 ± 0.014	280
S-HTXE-1817-0[1]	HTXE81730UO65		1	817 x 30	0.149	0.370	0.500 ± 0.015	335
S-HTXE-1X01045-0[1]	HTXE104530UO65	12293251-3	0	1045 x 30	0.116	0.410	0.560 ± 0.017	405
S-HTXE-2X01330-0[1]	HTXE133030UO65	12293251-4	00	1330 x 30	0.091	0.457	0.616 ± 0.018	535
S-HTXE-3X01666-0[1]	HTXE166630UO75		000	1666 x 30	0.071	0.520	0.680 ± 0.020	660
S-HTXE-4X02109-0[1]	HTXE210930UO75		0000	2109 x 30	0.056	0.585	0.800 ± 0.024	870

[1]Standard Stranding. High Strand counts may vary by a few strands.
[2]Alternate Stranding.

ELECTRICALS

Test	Test Method	Requirement
Voltage Rating	N/A	600 VRMS at Sea Level
Conductor Resistance	MIL-DTL-16878	Per Construction Table
Voltage Withstand	MIL-DTL-16878	3000 VRMS
Insulation Resistance	MIL-DTL-16878	100 MΩ-1000 ft Min
Conductor Continuity	MIL-DTL-16878	Continuous
Insulation Flaws (Spark Test)	MIL-DTL-16878	5000 VRMS
Jacket Flaws (Spark Test)	MIL-DTL-16878	8000 VRMS

PHYSICALS

Test	Test Method	Requirement
Temperature Rating	N/A	125°C Conductor Temperature
Visual and Dimensional	MIL-DTL-16878	Per Construction Table
Conductor Diameter	MIL-DTL-16878	Per Construction Table
Insulation Concentricity	MIL-DTL-16878	70% Min
Jacket Concentricity	MIL-DTL-16878	70% Min
Finished Diameter	MIL-DTL-16878	Per Construction Table
Low Temperature Cold Bend	MIL-DTL-16878	4 hours at -55°C, 3000 VRMS
Insulation Tensile Strength	MIL-DTL-16878	1500 PSI Min
Insulation Elongation	MIL-DTL-16878	100% Min
Jacket Tensile Strength	MIL-DTL-16878	1500 PSI Min
Jacket Elongation	MIL-DTL-16878	100% Min
Permanence of Print	MIL-DTL-16878	125 Cycles Min
Shrinkage	MIL-DTL-16878	4 hours at 150°C 0.5” Max
Flammability	MIL-DTL-16878	Self-Extinguishing within 60 seconds
Oil Resistance*	MIL-DTL-16878	20% Max Swell at 90°C
Fungus Resistance*	MIL-STD-810 Method 508.2	1 Max

**Oil Resistance.and Fungus Resistance are performed on FAI only.*