



Specification NXGN200™

High Performance, Lightweight and Normalweight, Seamless, Wire
Temperature Rating: -65°C to 150°C (Tin Coated), 200°C (Silver or Nickel Coated)

This unique wire provides the next generation wire end users have been looking for. A truly seamless wire since it is extruded, yet improved mechanical durability at elevated temperature compared to current extruded systems. In addition, it is lighter in weight than any current wire, and more economical than tape wrap construction. The product is insulated in two and three layer systems, for use as a component or hookup wire in Aerospace applications. The inner or middle layers are a modified high temperature material which has excellent high temperature mechanical and electrical performance. It has been modified to produce elongations over one hundred percent elongation. It is very light weight, and highly resistant to radiation. The outer layer in both systems is a modified irradiation cross-linked ETFE, a polymer well known for many years of use and performance in aircraft and space applications. The ETFE used in these products has been modified to include LoFlo™ technology thus eliminating concerns with storage due to fluoride outgassing. The unique properties of these materials when combined yield outstanding thermal, mechanical, chemical, and electrical performance.

Additional Benefits

The benefits are immediately evident. The inner layer is a highly durable high temperature inner layer which is extruded at high speed, for faster production time and shorter lead times than possible with tape construction.

Wire Processing

The outer layer provides an extremely chemical, moisture, and UV resistant surface. In addition, the normal weight construction meets NAVAIR requirements for arc track resistance. The surface is easy to mark with either ink jet, or laser. Because the outer layer is applied as a high speed extrusion, there is never any concern with tape edges tearing during installation.

Constructions

The construction is available in the Lightweight Weight and Normal Weight constructions. A further benefit is the specific gravity of the construction is lower than other typical aerospace wire providing for further weight savings.

NXGN200 is also manufactured in cable versions of 1 to 15 conductors, unshielded of shielded, unjacketed or jacketed.



Part Number Designation

SPEC	Insulation Thickness	-	AWG	Conductor Material	-	Color
NXGN200	L	-	30	A	-	9

Conductor Designations

Tin Copper	Silver Copper	Silver Alloy	Nickel Copper
T	S	A	N

Insulation Thickness

Light Weight	Normal Weight
L	N

Color Identification Code

Singles				
	Solid color Designators			Stripes
Use number color designators	0 = Black	4 = Yellow	8 = Grey	9/6 = White / Blue Stripe
	1 = Brown	5 = Green	9 = White	9/0 = White / Black Stripe
	2 = Red	6 = Blue		
	3 = Orange	7 = Violet		



Lightweight Construction Details

Part Number	Size (AWG)	Stranding	Material and Plating	Wire Dia. (in.)	Finished Wire Weight (lbs/1000ft.)
NXGN200L-30A-9	30	7	Silver Alloy	.024 ± .001	.56
NXGN200L-28A-9	28	7	Silver Alloy	.027 ± .001	.80
NXGN200L-26A-9	26	19	Silver Alloy	.032 ± .001	1.24
NXGN200L-24A-9	24	19	Silver Alloy	.036 ± .001	1.74
NXGN200L-22A-9	22	19	Silver Alloy	.042 ± .001	2.63
NXGN200L-20A-9	20	19	Silver Alloy	.050 ± .002	4.1
NXGN200L-26S-9	26	19	Silver Copper	.032 ± .001	1.24
NXGN200L-24S-9	24	19	Silver Copper	.036 ± .001	1.74
NXGN200L-22S-9	22	19	Silver Copper	.042 ± .001	2.63
NXGN200L-20S-9	20	19	Silver Copper	.050 ± .002	4.1
NXGN200L-18S-9	18	19	Silver Copper	.059 ± .002	6.24
NXGN200L-16S-9	16	19	Silver Copper	.065 ± .002	7.9
NXGN200L-14S-9	14	19	Silver Copper	.080 ± .002	12.26
NXGN200L-12S-9	12	37	Silver Copper	.101 ± .002	18.99

Component Performance Characteristics:

Accelerated Aging:	7 hrs. at 300°C
Blocking:	4 hrs. at 200°C
Dry Arc Propagation Resistance:	Pass
Flammability:	FAR 25
Humidity Resistance:	5000 meg-ohms min.
Insulation Resistance;	5000 meg-ohms min.
Immersion:	Tested per AS22759 Pass
Insulation Diameter:	Per above
Life Cycle:	500 hrs. at 200°C
Low Temperature Bend:	4 hrs. at -65°C, No cracks
Markability:.....	Ink Jet – 125 min cycles
Markability:.....	Laser – 70% min. contrast
Shrinkage:.....	.125" max. 4 hrs. at 230°C
Smoke:	230°C No visible smoke
Solderability:	Pass
Spark Test:	5700 Volts RMS
Stripability:	Pass
Wrap Test:	230C – 4X mandrel – Pass



Normal Weight Construction Details

Part Number	Size (AWG)	Stranding	Material and Plating	Wire Dia. (in.)	Finished Wire Weight (lbs/1000ft.)
NXGN200N-30A-9	30	7	Silver Alloy	.030 ± .001	.73
NXGN200N-28A-9	28	7	Silver Alloy	.033 ± .001	1.00
NXGN200N-26A-9	26	19	Silver Alloy	.038 ± .001	1.47
NXGN200N-24A-9	24	19	Silver Alloy	.042 ± .001	2.00
NXGN200N-22A-9	22	19	Silver Alloy	.048 ± .002	2.93
NXGN200N-20A-9	20	19	Silver Alloy	.056 ± .002	4.46
NXGN200N-26S-9	26	19	Silver Copper	.038 ± .001	1.47
NXGN200N-24S-9	24	19	Silver Copper	.042 ± .001	2.00
NXGN200N-22S-9	22	19	Silver Copper	.048 ± .002	2.93
NXGN200N-20S-9	20	19	Silver Copper	.056 ± .002	4.46
NXGN200N-18S-9	18	19	Silver Copper	.065 ± .002	6.67
NXGN200N-16S-9	16	19	Silver Copper	.073 ± .002	8.45
NXGN200N-14S-9	14	19	Silver Copper	.086 ± .002	12.73
NXGN200N-12S-9	12	37	Silver Copper	.107 ± .003	19.60

Component Performance Characteristics:

Accelerated Aging:	7 hrs. at 300°C
Blocking:	4 hrs. at 200°C
Dry Arc Propagation Resistance:	Pass
Flammability:	FAR 25
Humidity Resistance:	5000 meg-ohms min.
Insulation Resistance;	5000 meg-ohms min.
Immersion:	Tested per AS22759 Pass
Insulation Diameter:	Per above
Life Cycle:	500 hrs. at 200°C
Low Temperature Bend:	4 hrs. at -65°C, No cracks
Markability:.....	Ink Jet – 125 min cycles
Markability:.....	Laser – 70% min. contrast
Shrinkage:.....	.125” max. 4 hrs. at 230°C
Smoke:	230°C No visible smoke
Solderability:	Pass
Spark Test:	5700 Volts RMS
Stripability:	Pass
Wet Arc Propagation Resistance:	Pass
Wrap Test:	230C – 4X mandrel – Pass