

**Zerohal 100G**

**Product Facts**

- Meets requirements of VG 95218-20 Type E
- Halogen free, low smoke
- Highly flame retardant
- Flexible, easy to install
- Small size, lightweight (thin wall construction)



**Applications**

Zerohal 100G wire was originally developed to meet the requirements of German Specification VG 95218-20, Type E primary wire.

The construction is a dual wall combination of TE formulated polymer blends developed to meet the specification requirements while maintaining the desirable features of small size, lightweight, flexibility, non-wrinkling, ease of stripping, compatibility with standard stripping equipment, lack of recoil and mechanical robustness.

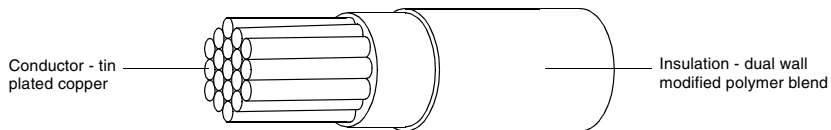
**System**

- System 100

**Physical Characteristics**

**Handleability**

Zerohal 100G wire has been designed for minimum recoil during harnessing operations, to be readily handleable by modern wiring and harnessing techniques and to be easily stripped with standard equipment and tools.



Available in:	Americas	Europe	Asia Pacific
	■	■	■

**Zerohal 100G** (Continued)

**Approvals**

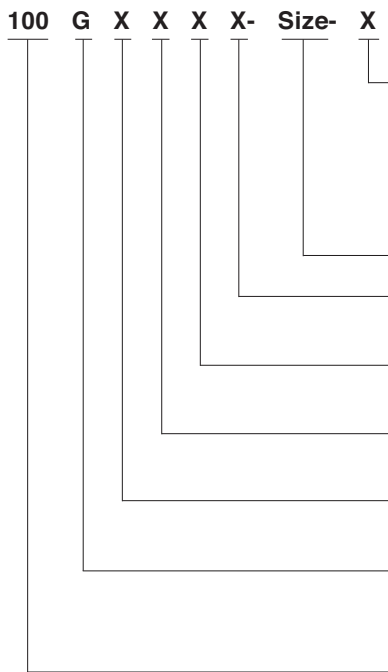
TE Specification WSD912 (Electrical cables and insulated wires for signals and power.  
- Part 20: Single core insulated wires.)

**Typical Properties**

Test	Method	Typical Value
Max. operating temperature	VG 95218-20, ASTM D 3032	125°C [257°F] (20,000 h)
Insulation shrinkage (150°C)	DIN VDE 0472 Pt 628, IEC 811-1-3	< 0.5%
Low temperature bend	VG 95218 - Pt 2	-55°C [-67 °F]
Pressure test at high temperature	DIN VDE 0472 Pt 609, IEC 811-3-1	125°C [257°F] < 30% indentation
Heat aging (150°C, 6 h)	DIN VDE 0472 Pt 303,	No cracking, no dielectric
(140°C, 120 h)	IEC 811-1-2	breakdown
Voltage rating	VG 95218-20	750/1300 V AC
Abrasion resistance	VG 95218 - Pt 2	Pass
Insulation blocking (125°C)	VG 95218 - Pt 2	Pass
Voltage withstand (23°C, 2.5 kV rms)	DIN VDE 0472 pt 509	Pass
Insulation resistance	DIN VDE 0472 pt 502, IEC 885-1	> 500 M ohms. km (20°C [68°F]) > 0.5 M ohms. km (90°C [194°F])
<b>Chemical resistance</b>		
Grease (G-354)*	VG 95218 - Pt 2, 70°C 24h	< 5% diameter change, no dielectric breakdown
Hydraulic fluid (H-515, H-544)*	VG 95218 - Pt 2, 50°C 24h	< 5% diameter change, no dielectric breakdown
Brake fluid (H-542)*	VG 95218 - Pt 2, 23°C 24h	< 5% diameter change, no dielectric breakdown
De-icing fluid (S-745)*	VG 95218 - Pt 2, 23°C 24h	< 5% diameter change, no dielectric breakdown
MEK	VG 95218 - Pt 2, 23°C 1h	< 5% diameter change, no dielectric breakdown
70/30 ISO-Octane/Toluene	VG 95218 - Pt 2, 23°C 24h	< 5% diameter change, no dielectric breakdown
<b>Insulation</b>		
Tensile strength	DIN VDE 0472 pt 602, IEC 811-1-1	> 20 MPa
Elongation at break	DIN VDE 0472 pt 602, IEC 811-1-1	> 200%

\*NATO code. For further details please consult the German Standard VG 95218-20, Type E.

**Part Numbering System**



**Primary Wire Insulation Color**

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

**Conductor Size**

**Conductor Type**

- 1 - Tin-plated copper

**Number of Conductors**

- 1

**Class of Wire**

- 1 - 750 V equipment wire

**Construction**

- 0 - Primary wire

**Wire Type**

- G - Meeting the performance requirements of German Specification VG 95218-20, Type E

**Basic Specification Number**

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

**Zerohal 100G** (Continued)

**Environmental Properties**

**Fluid Resistance**

Zerohal 100G wire demonstrates an outstanding balance of resistance to a wide range of commonly used solvents, fluids and lubricants.

**Voltage Rating**

Zerohal 100G wire is a 750/1300 V AC rated wire.

**Fire Hazard Characteristics**

Zerohal 100G wire is a halogen free insulation system and does not contain phosphorus or sulphur. It meets the toxicity, smoke density, halogen content, corrosivity and flammability requirements of VG 95218-20, Type E.

**Flammability**

Zerohal 100G wire meets the flammability/burning behavior requirements of VG 95218-20, Type E.

**Fire Hazard Properties**

Test	Method	Typical value
Toxicity	Def. Standard 02-713	3.5
Smoke density	IEC 1034 Pt 1 and 2	95% light transmittance
Halogen content	DIN VDE 0472 pt 815	Non-detected
Corrosivity of combustion gases	DIN VDE 0472 pt 813, IEC 754-2	5.0 pH, <4 µS/mm conductivity
Flammability	VG 95218 Pt 2	< 15 sec afterburn < 150 mm burn length

**Ordering Information**

Conductor Nominal Cross Sectional Area mm <sup>2</sup>	Stranding No. x nom. Dia. (mm)	Diameter		Insulated Wire Maximum Resistance at 20°C ohms/km	Diameter		Maximum Weight g/m	VG 95218 Part No.	Part No.
		min.	max.		min.	max.			
0.40	19x0.16	0.74 [.029]	0.79 [.031]	50.50	1.28 [.050]	1.39 [.055]	5.17	VG 95218 T020-E02*	100G0111-0.40-*
0.50	19x0.18	0.82 [.032]	0.90 [.035]	40.10	1.37 [.054]	1.47 [.058]	6.60	VG 95218 T020-E03*	100G0111-0.50-*
0.60	19x0.20	0.95 [.037]	1.01 [.040]	31.10	1.47 [.058]	1.57 [.062]	7.54	VG 95218 T020-E04*	100G0111-0.60-*
0.75	19x0.23	1.04 [.041]	1.15 [.045]	26.70	1.59 [.063]	1.70 [.067]	8.90	VG 95218 T020-E05*	100G0111-0.75-*
1.00	19x0.25	1.17 [.046]	1.26 [.050]	20.00	1.69 [.067]	1.80 [.071]	10.73	VG 95218 T020-E06*	100G0111-1.00-*
1.20	19x0.29	1.32 [.052]	1.42 [.056]	15.30	1.88 [.074]	1.98 [.078]	13.59	VG 95218 T020-E07*	100G0111-1.20-*
1.50	37x0.23	1.46 [.057]	1.58 [.062]	13.70	2.03 [.080]	2.13 [.084]	15.96	VG 95218 T020-E08*	100G0111-1.50-*
2.00	37x0.25	1.68 [.066]	1.82 [.072]	10.50	2.31 [.091]	2.41 [.095]	20.29	VG 95218 T020-E09*	100G0111-2.00-*
2.50	37x0.29	1.85 [.073]	2.01 [.079]	8.21	2.48 [.098]	2.63 [.104]	25.65	VG 95218 T020-E10*	100G0111-2.50-*
3.00	37x0.32	2.12 [.083]	2.24 [.088]	6.58	2.70 [.106]	2.86 [.113]	31.00	VG 95218 T020-E11*	100G0111-3.00-*
4.00	56x0.30	2.41 [.095]	2.56 [.101]	4.86	3.01 [.119]	3.16 [.124]	43.48	—	100G0111-4.00-*

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