

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

Zerohal 100

Type 100G
Wire and cable

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

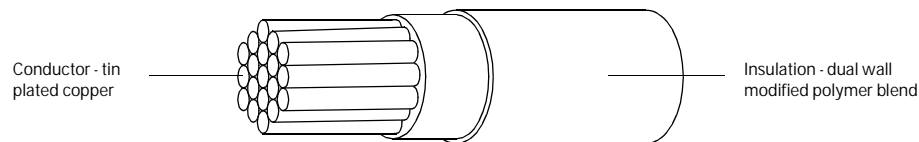
The construction is a dual wall combination of Raychem formulated polymer blends developed to meet the specification requirements whilst maintaining the desirable features of

small size, lightweight, flexibility, non-wrinkling, ease of stripping, compatibility with standard stripping equipment, lack of recoil and mechanical robustness.

Approvals

VG 95218-20, Type E (Electrical cables and insulated wires for low frequency - Part 20: Single core insulated wires.)

Ordering information



Conductor		Insulated wire							
Nominal cross sectional area	Stranding No x nom dia (mm)	Diameter (mm)		Maximum resistance at 20°C	Diameter (mm)		Maximum weight	VG 95218 part number	Raychem part number
mm ²		min	max	ohms/km	min	max	g/m		
0.15	19x0.10	0.46	0.50	130.20	0.98	1.08	2.59	VG 95218 T020-E12*	100G0111-0.15-*
0.25	19x0.13	0.55	0.63	82.00	1.09	1.19	3.59	VG 95218 T020-E01*	100G0111-0.25-*
0.40	19x0.16	0.74	0.79	50.50	1.28	1.39	5.17	VG 95218 T020-E02*	100G0111-0.40-*
0.50	19x0.18	0.82	0.90	40.10	1.37	1.47	6.60	VG 95218 T020-E03*	100G0111-0.50-*
0.60	19x0.20	0.95	1.01	31.10	1.47	1.57	7.54	VG 95218 T020-E04*	100G0111-0.60-*
0.75	19x0.23	1.04	1.15	26.70	1.59	1.70	8.90	VG 95218 T020-E05*	100G0111-0.75-*
1.00	19x0.25	1.17	1.26	20.00	1.69	1.80	10.73	VG 95218 T020-E06*	100G0111-1.00-*
1.20	19x0.29	1.32	1.42	15.30	1.88	1.98	13.59	VG 95218 T020-E07*	100G0111-1.20-*
1.50	37x0.23	1.46	1.58	13.70	2.03	2.13	15.96	VG 95218 T020-E08*	100G0111-1.50-*
2.00	37x0.25	1.68	1.82	10.50	2.31	2.41	20.29	VG 95218 T020-E09*	100G0111-2.00-*
2.50	37x0.29	1.85	2.01	8.21	2.48	2.63	25.65	VG 95218 T020-E10*	100G0111-2.50-*
3.00	37x0.32	2.12	2.24	6.58	2.70	2.86	31.00	VG 95218 T020-E11*	100G0111-3.00-*
4.00	56x0.30	2.41	2.56	4.86	3.01	3.16	43.48	-	100G0111-4.00-*

The VG 95218-20, Type E specification defines that the insulation colour shall be black, brown, yellow/green, blue or white only. To ensure full compliance with the specification, order the VG 95218 part number complete with colour code.

Raychem Type 100G wire, meeting the performance requirements of VG 95218-20, Type E, is available in other colours (see part numbering system). To order these colours, order the Raychem 100G part number.

*Colour code in accordance with part number system.

Zerohal 100G

Typical properties

Test	Method	Typical value
Max. operating temperature	VG 95218-20, ASTM D 3032	125°C (20,000 h)
Insulation shrinkage (160°C)	DIN VDE 0472 Pt 628, IEC 811-1-3	< 0.5%
Low temperature bend	VG 95218 - Pt 2	-55°C
Pressure test at high temperature	DIN VDE 0472 Pt 609, IEC 811-3-1	125°C, < 30% indentation
Heat ageing (150°C, 6 h) (140°C, 120 h)	DIN VDE 0472 Pt 303, IEC 811-1-2	No cracking, no dielectric 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) > 0.5 M ohms. km (90°C)
Chemical resistance		
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
Insulation		
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.

Physical characteristics

Handleability

Zerohal 100G 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.

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.

Zerohal 100G

Fire hazard characteristics

Zerohal 100G 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.

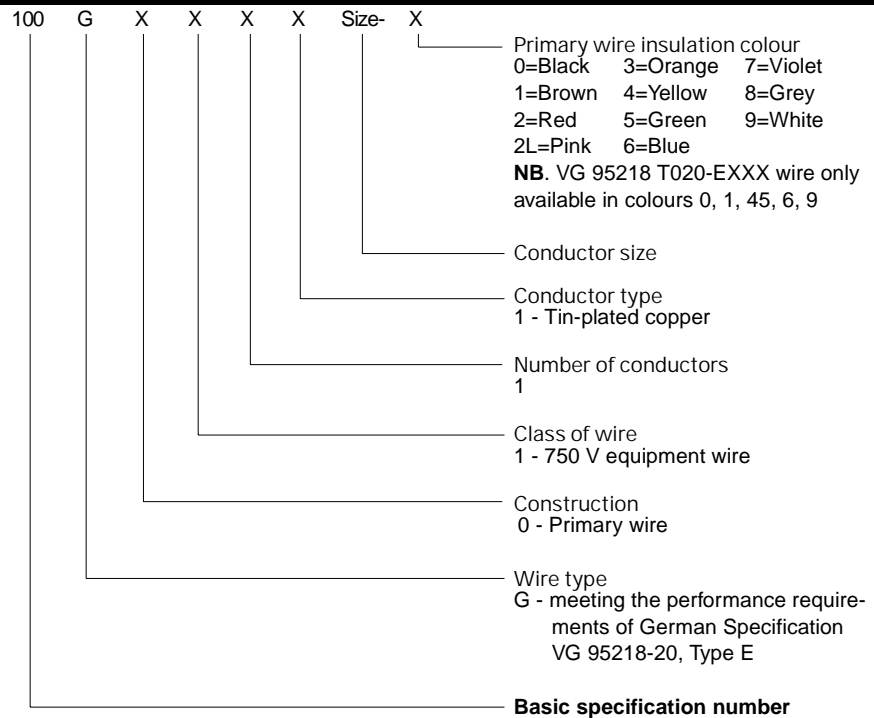
Flammability

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

Fire hazard properties

Test	Method	Typical value
Toxicity	NES 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

Part numbering system



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