

BETAtherm® 145

Single-core cable with increased environmental compatibility



Competitive advantage

- Very high resistance to temperature
- service temperature up to +145 °C
- Resistance to cold down to -55 °C
- Best fire performance, halogen free
- Electron-beam cross-linked
- Different approvals available

BETAtherm® 145 SO07Z-K

Application

Typical applications are internal wiring in lamps, heating appliances, electric machines (thermal class B) switchboards and distribution boxes in apparatus, mechanical and plant engineering.

Used for laying in tubes, surface wiring, direct in plaster or underneath it, as well in conduits. May not be laid directly in cable trays, cable racks or cable troughs.

Construction

- Conductor Tinned fine copper strands acc. to VDE 0295/IEC 60228, class 5
- Insulation Polyolefine copolymer, electron-beam cross-linked, HF90
- Core colour (further colours upon request)

Electrical properties

Nominal voltage	$U_0/U \leq 1 \text{ mm}^2$	300 V / 500 V
	$U_0/U \geq 1.5 \text{ mm}^2$	450 V / 750 V
fixed and protected installation	$U_0/U \geq 1.5 \text{ mm}^2$	600 V / 1000 V
Testing voltage		5000 V

Thermal properties

Conductor temperature	fixed installation	+145 °C max.
	occasionally moved	+120 °C max.
Short-circuit temperature		+280 °C max.
Ambient temperature	fixed installation	-55 °C min.
	occasionally moved	-35 °C min.

Bending radius













Fixed installation	$> 4 \times \text{outer } \varnothing \text{ min.}$
Occasionally moved	$> 6 \times \text{outer } \varnothing \text{ min.}$

Standards / material properties

- Halogen free: IEC 60754-1, EN 50267-2-1
- No corrosive gases: IEC 60754-2, EN 50267-2-2
- No toxic gases: NF X 70-100
- Low smoke density: IEC 61034, DIN EN 61034-2, EN 50268-2
- Flame retardant: EN/IEC 60332-1-2
- Non-flame propagating: IEC 60332-3, DIN EN 60332-3, EN 50266-2
- Low fire load: DIN 51900
- Cross-linked insulating compound HF90: IEC 60092-360

Approvals

- VDE permission no. 9887
- Germanischer Lloyd (GL)
- Lloyd's Register (LR)
- BUREAU VERITAS (BV)
- DNV certificate no. E-8964
- CHINA CLASSIFICATION SOCIETY (CCS)
- Gost R

Cross-section	Outer Ø	Weight	Fire load	Order no. (by Core colour)											
mm ²	mm	kg/km	kWh/m												
0.25	1.6	5	0.009	190799	190792	190794	190797	190798	190793	Ø	190795	215088	Ø	212324	190796
0.33	1.7	6	0.010	Ø	213862	Ø	Ø	212377	214206	Ø	Ø	Ø	Ø	Ø	Ø
0.50	1.9	8	0.012	190815	190808	190810	190813	190814	190809	191558	190811	211454	213414	219356	190812
0.75	2.2	11	0.017	190823	190816	190818	190821	190822	190817	191676	190819	211399	211663	211662	190820
1	2.4	14	0.020	190831	190824	190826	190829	190830	190825	191548	190827	191551	191550	191549	190828
1.5	3.0	20	0.030	190839	190832	190834	190837	190838	190833	191553	190835	191554	191552	191555	190836
2.5	3.7	32	0.043	190847	190840	190842	190845	190846	190841	211700	190843	211400	212277	212276	190844
4	4.2	46	0.051	190855	190848	190850	190853	190854	190849	304349	190851	211401	Ø	300694	190852
6	4.7	65	0.060	190863	190856	190858	190861	190862	190857	216824	190859	211864	Ø	Ø	Ø
10	6.1	108	0.097	191557	190864	191556	218311	217184	218511	304234	Ø	211865	Ø	Ø	Ø
16	7.2	164	0.127	211335	190865	211334	212169	211333	Ø	301297	Ø	211866	Ø	Ø	Ø
25	8.6	247	0.168	212373	190866	213563	Ø	Ø	Ø	Ø	Ø	211867	Ø	Ø	Ø
35	10.1	349	0.225	211496	190867	215266	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
50	12.5	507	0.348	211574	190868	215265	Ø	217185	Ø	Ø	Ø	Ø	Ø	Ø	Ø
70	14.0	691	0.404	211984	190869	300541	Ø	Ø	220111	Ø	Ø	Ø	Ø	Ø	Ø
95	16.0	912	0.500	213697	190870	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
120	17.8	1138	0.555	Ø	210750	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
150	20.0	1436	0.761	219494	210751	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
185	21.9	1725	0.838	Ø	191675	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
240	25.1	2278	1.043	Ø	210752	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
300	28.1	2872	1.341	Ø	301298	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø