

# HELUTHERM® 145

temperature-resistant, crosslinked, improved behaviour in case of fire



## TECHNICAL DATA

### Single core

<b>Temperature range</b>	flexible -35°C to +120°C fixed -55°C to +145°C
<b>Nominal voltage</b>	0.25 - 1 mm <sup>2</sup> : AC U <sub>0</sub> /U 300/500 V 1.5 - 240 mm <sup>2</sup> : AC U <sub>0</sub> /U 450/750 V 1.5 - 240 mm <sup>2</sup> : fixed and protected installation AC U <sub>0</sub> /U 600/1000 V
<b>Test voltage</b>	3500 V
<b>Minimum bending radius</b>	flexible 8x Outer-Ø fixed 4x Outer-Ø

## CABLE STRUCTURE

- Copper wire tinned, finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
- Core insulation: cross-linked polyolefin
- Core identification: see table

## PROPERTIES

- resistant to: oil, UV radiation, ozone, weathering effects
- abrasion-resistant, notch-resistant
- for outdoor use
- halogen-free
- the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers
- no fire propagation

## TESTS

- halogen-free acc. to DIN VDE 0482-754-1 / DIN EN 60754-1 / IEC 60754-1
- corrosiveness of combustion gases acc. to DIN VDE 0482-754-2 / DIN EN 60754-2 / IEC 60754-2
- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2
- bundle fire test acc. to DIN VDE 0482-332-3-22 / DIN EN 60332-3-22 / IEC 60332-3-22
- smoke density acc. to DIN VDE 0482-1034-1+2 / DIN EN 61034-1+2 / IEC 61034-1+2
- protection against fire acc. to DIN EN 45545-2
- oil-resistant acc. to DIN VDE 0473-811-404 / DIN EN 60811-404 / IEC 60811-404, IRM 902 4h at +70°C
- certifications and approvals:  
EAC  
0.5 - 240 mm<sup>2</sup>: DNV

## APPLICATION

Temperature resistant single core for the internal wiring of lighting fixtures, heaters, electrical machinery, switching systems and distributors in industrial equipment as well as plant and machinery construction; suitable for laying in tubes on and under plaster, in closed installation ducts, as well as for traffic systems and outdoor applications. Not suitable for direct laying in cable ladders and cable trays, except as a potential equalization cable.

## NOTES

- the conductor is metrically (mm<sup>2</sup>) constructed, AWG numbers are approximated, and are for reference only

Cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.	black (RAL 9005)	green-yellow	blue (RAL 5015)	brown (RAL 8003)	red (RAL 3000)	white (RAL 9010)	grey (RAL 7001)	violet (RAL 4005)
					Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	
0.25	24	1.6	2.4	4.0	50999	50998	51070	51071	51072	51073	51074	51075
0.34	22	1.7	3.2	5.0	51167	51166	51168	51169	51170	51171	51172	51173
0.5	20	1.9	4.8	7.0	51281	51280	51282	51283	51284	51285	51286	51287
0.75	19	2.2	7.2	11.0	51295	51294	51296	51297	51298	51299	51300	51301
1	18	2.5	9.6	14.0	51309	51308	51310	51311	51312	51313	51314	51315
1.5	16	2.9	14.4	20.0	51323	51322	51324	51325	51326	51327	51328	51329
2.5	14	3.5	24.0	30.0	51337	51336	51338	51339	51340	51341	51342	51343
4	12	4.3	38.0	47.0	51351	51350	51352	51353	51354	51355	51356	51357
6	10	5.0	58.0	72.0	51365	51364	51366	51367	51368	51369	51370	51371
10	8	6.3	96.0	120.0	51379	51378	51380	51381	51382	51383	51384	51385
16	6	7.3	154.0	182.0	51420	51419	51421	51422	51423	51424	51425	51426
25	4	9.6	240.0	272.0	51434	51433	51435	51436	51437	51438	51439	51440
35	2	10.8	336.0	371.0	51448	51447	51449	51450	51451	51452	51453	51454
50	1	12.6	480.0	530.0	51462	51461	51463	51464	51465	51466	51467	51468
70	2/0	14.6	672.0	730.0	51476	51475	51477	51478	51479	51480	51481	51482
95	3/0	16.5	912.0	964.0	51490	51489	51491	51492	51493	51494	51495	51496
120	4/0	18.0	1152.0	1235.0	51504	51503	51505	51506	51507	51508	51509	51510

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					Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	
150	300 kcmil	20.0	1440.0	1523.0	<b>51518</b>	<b>51517</b>	<b>51519</b>	<b>51520</b>	<b>51521</b>	<b>51522</b>	<b>51523</b>	<b>51524</b>
185	350 kcmil	22.2	1776.0	1850.0	<b>51532</b>	<b>51531</b>	<b>51533</b>	<b>51534</b>	<b>51535</b>	<b>51536</b>	<b>51537</b>	<b>51538</b>
240	500 kcmil	24.5	2304.0	2432.0	<b>51546</b>	<b>51545</b>	<b>51547</b>	<b>51548</b>	<b>51549</b>	<b>51550</b>	<b>51551</b>	<b>51552</b>

Cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.	yellow (RAL 1021)	orange (RAL 2003)	green (RAL 6018)	dark blue (RAL 5010)	beige (RAL 1001)
					Part no.	Part no.	Part no.	Part no.	Part no.
0.25	24	1.6	2.4	4.0	<b>51076</b>	<b>51077</b>	<b>51078</b>	<b>51079</b>	<b>51164</b>
0.34	22	1.7	3.2	5.0	<b>51174</b>	<b>51175</b>	<b>51176</b>	<b>51177</b>	<b>51178</b>
0.5	20	1.9	4.8	7.0	<b>51288</b>	<b>51289</b>	<b>51290</b>	<b>51291</b>	<b>51292</b>
0.75	19	2.2	7.2	11.0	<b>51302</b>	<b>51303</b>	<b>51304</b>	<b>51305</b>	<b>51306</b>
1	18	2.5	9.6	14.0	<b>51316</b>	<b>51317</b>	<b>51318</b>	<b>51319</b>	<b>51320</b>
1.5	16	2.9	14.4	20.0	<b>51330</b>	<b>51331</b>	<b>51332</b>	<b>51333</b>	<b>51334</b>
2.5	14	3.5	24.0	30.0	<b>51344</b>	<b>51345</b>	<b>51346</b>	<b>51347</b>	<b>51348</b>
4	12	4.3	38.0	47.0	<b>51358</b>	<b>51359</b>	<b>51360</b>	<b>51361</b>	<b>51362</b>
6	10	5.0	58.0	72.0	<b>51372</b>	<b>51373</b>	<b>51374</b>	<b>51375</b>	<b>51376</b>
10	8	6.3	96.0	120.0	<b>51386</b>	<b>51387</b>	<b>51388</b>	<b>51389</b>	<b>51390</b>
16	6	7.3	154.0	182.0	<b>51427</b>	<b>51428</b>	<b>51429</b>	<b>51430</b>	<b>51431</b>
25	4	9.6	240.0	272.0	<b>51441</b>	<b>51442</b>	<b>51443</b>	<b>51444</b>	<b>51445</b>
35	2	10.8	336.0	371.0	<b>51455</b>	<b>51456</b>	<b>51457</b>	<b>51458</b>	<b>51459</b>
50	1	12.6	480.0	530.0	<b>51469</b>	<b>51470</b>	<b>51471</b>	<b>51472</b>	<b>51473</b>
70	2/0	14.6	672.0	730.0	<b>51483</b>	<b>51484</b>	<b>51485</b>	<b>51486</b>	<b>51487</b>
95	3/0	16.5	912.0	964.0	<b>51497</b>	<b>51498</b>	<b>51499</b>	<b>51500</b>	<b>51501</b>
120	4/0	18.0	1152.0	1235.0	<b>51511</b>	<b>51512</b>	<b>51513</b>	<b>51514</b>	<b>51515</b>
150	300 kcmil	20.0	1440.0	1523.0	<b>51525</b>	<b>51526</b>	<b>51527</b>	<b>51528</b>	<b>51529</b>
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