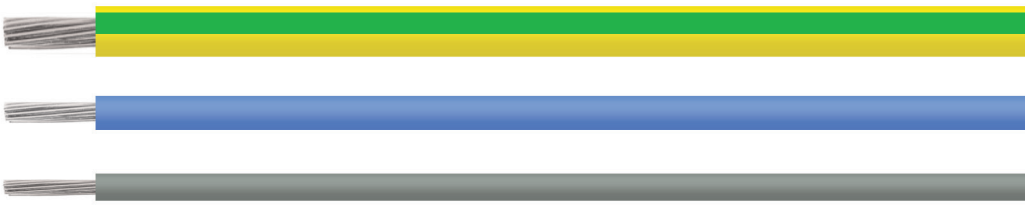
# HELUTHERM® 145

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



## TECHNICAL DATA

**Single core**

| | |
|---|---|
| **Temperature range** | flexible -40°C to +120°C<br>fixed -55°C to +145°C |
| **Nominal voltage** | 0.25 - 1 mm²: AC $U_0$/U 300/500 V<br>1.5 - 240 mm²: AC $U_0$/U 450/750 V<br>1.5 - 240 mm²: fixed and protected installation AC $U_0$/U 600/1000 V |
| **Test voltage** | 3500 V |
| **Minimum bending radius** | flexible 8x Outer-Ø<br>fixed 4x Outer-Ø |

## CABLE STRUCTURE

- Copper wire tinned, 0.5 - 240 mm²: finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
- Strand construction:
  0.25 mm²: approx. 14 x 0.15 mm
  0.34 mm²: approx. 19 x 0.15 mm
- 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
- certifications and approvals:
  EAC
  0.5 - 240 mm²: 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 (mm²) constructed, AWG numbers are approximated, and are for reference only

| Cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. | black Part no. | green-yellow Part no. | blue Part no. | brown Part no. | red Part no. | white Part no. | grey Part no. | violet 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** |

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# HELUTHERM® 145

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

| Cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. | black Part no. | green-yellow Part no. | blue Part no. | brown Part no. | red Part no. | white Part no. | grey Part no. | violet Part no. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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** |
| 150 | 300 kcmil | 20.0 | 1440.0 | 1523.0 | **51518** | **51517** | **51519** | **51520** | **51521** | **51522** | **51523** | **51524** |
| 185 | 350 kcmil | 22.2 | 1776.0 | 1850.0 | **51532** | **51531** | **51533** | **51534** | **51535** | **51536** | **51537** | **51538** |
| 240 | 500 kcmil | 24.5 | 2304.0 | 2432.0 | **51546** | **51545** | **51547** | **51548** | **51549** | **51550** | **51551** | **51552** |

| Cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. | yellow Part no. | orange Part no. | green Part no. | dark blue Part no. | beige Part no. |
|---|---|---|---|---|---|---|---|---|---|
| 0.25 | 24 | 1.6 | 2.4 | 4.0 | **51076** | **51077** | **51078** | **51079** | **51164** |
| 0.34 | 22 | 1.7 | 3.2 | 5.0 | **51174** | **51175** | **51176** | **51177** | **51178** |
| 0.5 | 20 | 1.9 | 4.8 | 7.0 | **51288** | **51289** | **51290** | **51291** | **51292** |
| 0.75 | 19 | 2.2 | 7.2 | 11.0 | **51302** | **51303** | **51304** | **51305** | **51306** |
| 1 | 18 | 2.5 | 9.6 | 14.0 | **51316** | **51317** | **51318** | **51319** | **51320** |
| 1.5 | 16 | 2.9 | 14.4 | 20.0 | **51330** | **51331** | **51332** | **51333** | **51334** |
| 2.5 | 14 | 3.5 | 24.0 | 30.0 | **51344** | **51345** | **51346** | **51347** | **51348** |
| 4 | 12 | 4.3 | 38.0 | 47.0 | **51358** | **51359** | **51360** | **51361** | **51362** |
| 6 | 10 | 5.0 | 58.0 | 72.0 | **51372** | **51373** | **51374** | **51375** | **51376** |
| 10 | 8 | 6.3 | 96.0 | 120.0 | **51386** | **51387** | **51388** | **51389** | **51390** |
| 16 | 6 | 7.3 | 154.0 | 182.0 | **51427** | **51428** | **51429** | **51430** | **51431** |
| 25 | 4 | 9.6 | 240.0 | 272.0 | **51441** | **51442** | **51443** | **51444** | **51445** |
| 35 | 2 | 10.8 | 336.0 | 371.0 | **51455** | **51456** | **51457** | **51458** | **51459** |
| 50 | 1 | 12.6 | 480.0 | 530.0 | **51469** | **51470** | **51471** | **51472** | **51473** |
| 70 | 2/0 | 14.6 | 672.0 | 730.0 | **51483** | **51484** | **51485** | **51486** | **51487** |
| 95 | 3/0 | 16.5 | 912.0 | 964.0 | **51497** | **51498** | **51499** | **51500** | **51501** |
| 120 | 4/0 | 18.0 | 1152.0 | 1235.0 | **51511** | **51512** | **51513** | **51514** | **51515** |
| 150 | 300 kcmil | 20.0 | 1440.0 | 1523.0 | **51525** | **51526** | **51527** | **51528** | **51529** |
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