

Cable Solutions for Industrial Installations

BETAtherm[®] and BETAflam[®] – Safety for People and Machinery



Overloads, heat, and tightening fire safety regulations challenge your systems daily. Standard cables often fall short. Our halogen-free, high-temperature resistant **BETAtherm[®]** and **BETAflam[®]** cables offer reliable protection – even during short circuits – ensuring safe, durable, and compliant wiring for your industrial installations.

Maximum safety with **BETAtherm[®]** & **BETAflam[®]** cables

The safety and availability of technical installations are becoming increasingly important. Legal requirements in the areas of fire protection and mitigation of fire consequences are constantly being tightened. A key contribution to fire prevention in electrical installations is the use of cross-linked insulating materials, ensuring cables remain operational even in the event of a short circuit. Our **BETAtherm[®]** and **BETAflam[®]** cables have been specifically developed to meet these high demands.

Fire protection and sustainability

To effectively protect your machinery from fire caused by overload or excessive temperatures, halogen-free wires with short-circuit resistance are essential. Unlike halogen-containing cables such as PVC, no highly toxic dioxins or furans are released in case of fire. Protect people and machinery by relying on our products, which also contribute to sustainability thanks to their long service life.

Advantages

- Very high temperature resistance
- Operating temperature: -55 °C to +155 °C
- Sustainable due to very long service life (220,000 h at 90 °C, 5,000 h at 155 °C)
- Excellent fire safety characteristics
- Short-circuit resistance (thermal pressure resistant)
- Halogen-free (except BT 155)
- Electron beam cross-linked
- VDE, various marine and offshore approvals, CPR
- UL 3271 / 3820 UL/cUL CSA (BT 145)
- UL/cUL 3289 (BT 155)

Halogen-free, heat-Resistant, and robust

Our robust, halogen-free, electron beam cross-linked single-core wires and multi-core cables are characterized by their enhanced behaviour in fire scenarios and high temperature resistance. They meet the latest safety requirements of the Construction Products Regulation (CPR) and ensure safe, sustainable wiring of industrial systems. Notably, they offer excellent thermal pressure resistance during short circuits. Our multi-core cables also provide outstanding UV resistance and strong resilience against weather conditions and numerous oils.

Expertise in safe cabling solutions

Rely on our high-quality products for internal wiring of electric machines (thermal classes B & F), control panels, and distribution systems. Thanks to our high manufacturing depth and Swiss quality, we offer flexible, customized cable solutions.

Single-core

	Nominal voltage	Temperature range	Cross sections	Certifications
BETAtherm ® 90	600 / 1000 V	-40 °C to +105 °C	0.5 mm ² to 240 mm ²	VDE, ESTI, CPR
BETAtherm ® 145	600 / 1000 V	-55 °C to +145 °C	0.25 mm ² to 300 mm ²	VDE, DNV/GL, Lloyd's Register, BUREAU VERITAS, CPR
BETAtherm ® 155	600 / 1000 V	-55 °C to +155 °C	0.25 mm ² to 150 mm ²	

Multi-core and shielded cables

	Nominal voltage	Temperature range	Cross sections	Certifications
BETAflam ® 145 flex	600 / 1000 V	-55 °C to +145 °C	2 × 0.5 mm ² to 5 × 95 mm ²	DNV/GL, Lloyd's Register, BUREAU VERITAS, CPR
BETAflam ® 145 C-flex	600 / 1000 V	-55 °C to +145 °C	2 × 0.5 mm ² to 5 × 35 mm ²	DNV/GL, Lloyd's Register, BUREAU VERITAS, CPR

Single-core and multi-core cables with UL certification

	Nominal voltage	Temperature range	Cross sections	Certifications
BETAtherm ® 145 UL/CSA 3266	300 V	-55 °C to +145 °C	AWG24 to AWG12	UL, CSA
BETAtherm ® 145 UL/CSA/cUL/ 3271/3820	1000 V	-55 °C to +145 °C	0.25 mm ² to 240 mm ²	UL, CSA, cUL
BETAflam ® 145 flex UL/cUL AWM 4486	1000 V	-55 °C to +145 °C	2 × 0.5 mm ² to 5 × 95 mm ²	UL, cUL
BETAflam ® 145 C-flex UL/cUL AWM 4486	1000 V	-55 °C to +145 °C	2 × 0.5 mm ² to 5 × 35 mm ²	UL, cUL
BETAtherm ® 155 UL/cUL/ 3289	600 V	-55 °C to +155 °C	0.25 mm ² to 120 mm ²	UL, cUL



Further information can be found in our data sheets on our website: <https://studercables.com/en/products/>

In addition to first-class products, Studer Cables offers comprehensive advice, precise calculations and other services. If you have any questions, please do not hesitate to contact us personally.