

## Extremely durable and flexible FLEXTREME<sub>TC</sub> cables

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**A line of power and control cables (TRAY CABLE type) – i.e. high-quality products characterized by both exceptional mechanical durability and flexibility of use.**

### SAFETY OF ASSEMBLY AND OPERATION

Depending on the purpose of cables, FLEXTREME<sub>TC</sub> includes power and control cables – both types can be installed in cable trays, raceways, in free air, as well as in wet and dry locations. Furthermore, meeting the requirements of the “Crushing Test” enables to place cables directly in the ground. Power cables are made of numbered insulated wires and a bare grounding wire, while in control cables – all wires are insulated (including grounding one). These wires are marked with appropriate color. The inherent advantage of FLEXTREME<sub>TC</sub> cables is their high level of flexibility, which guarantees easy assembly. The easy installation has an impact on shorter realization.

### INCREASED PERFORMANCE - XHHW-2 (EPR) INSULATION AND COATING (CPE).

Structural elements that increase the efficiency of the FLEXTREME<sub>TC</sub> line include:

- **External coating** made of CPE thermosetting rubber compound. Thanks to this material, wires can be easily bent, thus maintaining high resistance to tearing and wear. The specially developed CPE rubber compound has excellent performance in “tensile strength” and “elongation at break”. Values before aging maintain the minimum requirements of UL 44, and even they reach higher values by 106% and 115% (respectively). On the other hand, after aging in natural air circulation – by 55% and 18%. Furthermore, the CPE coating is lead-free, flame retardant and it does not exhibit falling hot drips.
- **Insulation**, made of EPR-based rubber compound (XHHW-2 type). Lead-free, flame retardant (FT4), easy to strip and resistant to water absorption. Additional enrichment of the EPR-based rubber compound structure with thermoplastic PE caused that the insulation is characterized by better mechanical strength and crush resistance.
- **Side inserts**, consisting of EPDM rubber compound with increased hardness and crush resistance. The use of inserts helps to evenly distribute mechanical loads over the whole cable’s structure. Moreover, it protects individual wires against damage and maintains the aesthetic appearance of the cable.

- Appropriately selected **polyester tapes** condition the mechanical transmission of a given load to the entire cable's structure and they constitute an additional endurance barrier. Furthermore, they limit the mixing of individual wires during crushing, thus conditioning the maintenance of a round shape of wires.

### Unique mechanical properties of FLEXTREME<sub>TC</sub>

The construction of FLEXTREME<sub>TC</sub> was developed in accordance with the requirements of „Dir Bur” (UL 1277 Crushing Test – Cable Marked for Direct Burial), i.e. products of FLEXTREME<sub>TC</sub> line are resistant to crushing and cutting (compression cut). Moreover, they have excellent physical, thermal and electric properties. These wires are not only resistant to solar radiation and moisture (moisture resistance), but they are also resistant to oil (UL 1277) and ozone (EN 60811-403, method A). They are fireproof (FT4 UL 1685) and can work in temperatures from -40°C to 90°C, meeting the cold bending test at -25°C.

TFKable's FLEXTREME<sub>TC</sub> products meet the REACH regulation and the ROHS directive.