# Cables for Railway Technology 

Selection table

Cables for Railway Technology acc. to EN 45545-2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{o} \\ & \text { x } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Single conductor | - | - |  |  |  |  |  |  |  |  |  | - |  |  | - |  |
|  | Multi-core cable |  |  | - | $\bigcirc$ | - | - | - | - | - | - | - | - | - | - |  | $\bigcirc$ |
|  | screened |  |  |  | - |  | - | - | - | - | - | - |  | - |  |  | $\bigcirc$ |
|  | Wiring cable | - | - |  |  |  |  |  |  |  |  |  | - |  |  |  |  |
|  | Data cable |  |  |  |  | - | - | - |  |  |  |  |  |  |  |  |  |
|  | Control cable |  |  | - | - |  |  |  | - | - |  |  | - | - | - |  |  |
|  | Ethernet cable |  |  |  |  |  |  |  |  |  | - | - |  |  |  |  |  |
|  | USB 2.0 cable |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |
|  | cross linked type |  |  |  |  |  |  |  |  | 0 |  |  | - | $\bigcirc$ | - |  |  |
|  | tested acc. to EN 45545-2 | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | C | O | - | - | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ |
|  | acc. to EN 50306-1 + EN 50264-1 are fulfilled. <br> Development of HCl is $<0,5 \%$ acc. to DIN EN 50267-2-1. <br> pH -value is > 4,3 acc. to DIN EN 50267-2-2. <br> Conductivity is $<10,0 \mu \mathrm{~S} / \mathrm{mm}$ acc. to DIN EN 50267-2-2. <br> Fluoric content < $0,1 \%$ acc. to DIN EN 60684-2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
|  | No flame propagation acc. to IEC 60332-3-24, IEC 60332-3-25 + EN 50305 section 9.1.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
|  | Flame retardant acc. to UL 1685 section 12, FT4/IEEE 1202 (NFPA 130) |  |  |  |  | - | - | - |  |  |  |  |  |  |  |  |  |
|  | Burning test acc. to ASTM E 162-09 |  |  |  |  |  | - | - |  |  |  |  |  |  |  |  |  |
|  | Flame retardant acc. to ISO 6722 (UN/ECE R118) | - | - | - | - | - | - | - | - | - | - | - |  |  |  |  |  |
|  | Insulation integrity in case of fire acc. to EN 50200 PH 30, VDE 0482-200, IEC 60331-21 FE 180 + VDE 0482-331-21 |  |  |  |  |  |  |  |  |  |  |  |  |  | - |  |  |
|  | Toxicity acc. to EN 50305 + VDE 0260-305 | - | $\bigcirc$ | $\bigcirc$ | - | - | - | - | - | - | $\bigcirc$ | $\bigcirc$ | - | - | - | - | $\bigcirc$ |
|  | Smoke density acc. to IEC 61034 + VDE 0482-1034 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | $\bigcirc$ |
|  | Smoke density acc. to ASTM E 662-09 |  |  |  | - | - |  |  |  |  |  |  |  |  |  |  |  |
|  | Oil and fuel resistance acc. to EN 50264-1 + VDE 0260-264-1 |  |  |  |  |  |  |  | - | - |  | $\bigcirc$ |  |  |  |  | - |
|  | good ozone, UV and weather resistance |  |  |  |  |  |  |  | - | - |  |  |  |  |  | $\bigcirc$ |  |
|  | $+250{ }^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |
|  | $+180^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+125^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $+90^{\circ} \mathrm{C}$ |  |  |  |  |  | - |  |  |  |  | - |  |  |  |  |  |
|  | $+70^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  | O |  |  |  |  |  |  |
|  | $-40^{\circ} \mathrm{C}$ $-50{ }^{\circ} \mathrm{C}$ |  | , | , | , |  | , | , |  |  | , |  |  |  |  |  |  |
| $\begin{aligned} & \mathbb{\otimes} \\ & \frac{\pi}{\square} \end{aligned}$ | Peak operating voltage max. 30 V | , |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |
|  | Peak operating voltage max. 90 V |  |  |  |  |  |  |  |  |  | - | - |  |  |  |  |  |
|  | Peak operating voltage: <br> $<0,25 \mathrm{~mm}^{2}=\max .350 \mathrm{~V}$ <br> $\geq 0,25 \mathrm{~mm}^{2}=\max .500 \mathrm{~V}$ |  |  |  |  | - | - | - |  |  |  |  |  |  |  |  |  |
|  | Nominal voltage Uo/U $300 / 500 \mathrm{~V}$ | - |  | - | - |  |  |  | - | - |  |  | - | $\bigcirc$ | - |  |  |
|  | Nominal voltage Uo/U 450/750 V |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Nominal voltage Uo/U 0,6/1 kV |  |  |  |  |  |  |  |  | - |  |  |  |  |  |  |  |
|  | Nominal voltage Uo/U 1,8/3 kV |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |  |
|  | Testing voltage 600 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |
|  | Testing voltage 1500 V |  |  |  |  | - | - | - |  |  | - | - |  |  |  |  |  |
|  | Testing voltage 2000 V | - |  |  |  |  |  |  | - | - |  |  | - | - | - |  |  |
|  | Testing voltage 2500 V |  | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 3000 V |  |  | - | - |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Testing voltage 4000 V |  |  |  |  |  |  |  |  | - |  |  |  |  |  |  |  |
|  | Testing voltage 6500 V |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |

