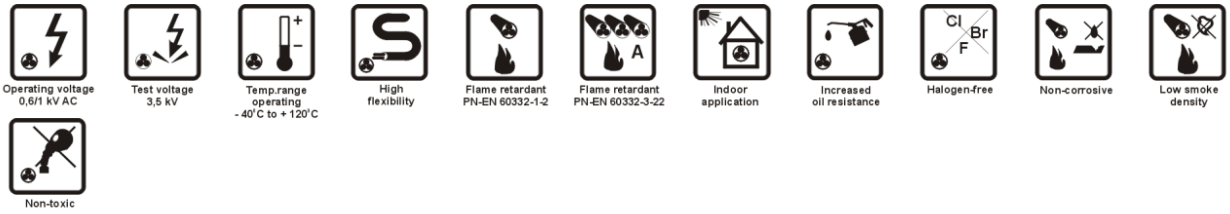
TECHNORAY- 3

RAILWAY WIRES



APPLICATIONS

TECHNORAY-3 halogen free single-core wires are intended for fixed and mobile connections in vehicles, rolling stock and transport. Wires can also be used for control, protection and monitoring systems or power supply.

The wires are designed to offer high flexibility combined with tensile strength.

Continuous operation at higher temperatures and a high level of fire safety is offered due to application of **electron beam crosslinked halogen free compound** insulation.

Halogen free wires are applied in locations where, in case of fire, higher safety level for human beings and expensive electronic equipment is required. The wires are flame retardant and their smoke emission is low, emitted fumes are non toxic and non corrosive.

The wires are designed for frequent contact with petroleum products. The wire insulation is then made of special halogen free compound meeting oil resistance requirements of Polish standard PN-EN 60811-404.

Wires are **approved by the Institute of Railways** for use in vehicles, rolling stock and transport.

CONSTRUCTION

- flexible, multiwire conductors, stranded of annealed tinned copper wires, meeting requirements of class 5 per PN-EN 60228,
- dual wall insulation made of electron beam crosslinked halogen free compound (EI 104), black, other colours also available.

TECHNORAY- 3

CHARACTERISTICS

Conductor cross-section	mm^2	**0.5**	**0.75**	**1**	**1.5**	**2.5**	**4**	**6**
DC conductor resistance at 20°C, maximum	Ω/km	40.1	26.7	20.0	13.7	8.21	5.09	3.39
Conductor cross-section	mm^2	**10**	**16**	**25**	**35**	**50**	**70**	**95**
DC conductor resistance at 20°C, maximum	Ω/km	1.95	1.24	0.795	0.565	0.393	0.277	0.210

Operating voltage Uo/U	600/1000 V
Voltage test	3.5 kV rms
Corrosivity of emitted gases per	PN-EN 60754-1, PN-EN 60754-2, IEC 60754-2
pH appr.	6
conductivity appr.	0.8 µS/mm
Smoke density	PN-EN 61034-2, IEC 61034-2
light transmittance, minimum	90 %

Operating temperature range	from - 40 to + 120°C (20 000 h)
Minimum bending radius:	
for fixed installation	D≤10 mm - 3 x wire diameter D>10 mm - 4 x wire diameter
for movable installation	D≤10 mm - 5 x wire diameter D>10 mm - 6 x wire diameter
Wire combustibility	flame retardant
Combustibility tests	PN-EN 60332-1-2, IEC 60332-1-2 PN-EN 60332-3-22, IEC 60332-3-22 (cat. A) PN-K-02508
Oil resistance	PN-EN 60811-404
Reference standards	PN-EN 50264-2-1, PN-K-02511

CE = the wire meets requirements of the low voltage directive 2014/35/EU

Product No.	Conductor cross-section	Wire outer diameter (appr.)	Copper index	Wire weight (appr.)
	mm^2	mm	kg/km	kg/100 m
1288 018	0,5	2.1	4.8	0.9
1288 019	0,75	2.4	7.2	1.2
1288 010	1,0	2.9	9.6	1.7
1288 005	1,5	3.2	14.4	2
1288 007	2,5	3.6	24	3
1288 011	4	4.1	38.4	4.5
1288 012	6	4.8	58	7

Product No.	Conductor cross-section	Wire outer diameter (appr.)	Copper index	Wire weight (appr.)
	mm^2	mm	kg/km	kg/100 m
1288 020	10	6.2	96	11
1288 013	16	7.3	154	16
1288 014	25	8.9	240	25
1288 015	35	10.1	336	35
1288 016	50	11.8	480	49
1288 017	70	13.5	672	67

Other cross-sections available on request.
TECHNOKABEL S.A. reserves the right to change specifications without prior notice.