

# MULTISPEED® 500-TPE high flexible, safety against high bending

## in drag chain systems, low torsion, halogen-free, meter marking



### Technical data

- Special drag chain cables for high mechanical stress in adapted to DIN VDE 0281 part 13 and E DIN VDE 0245
- **Temperature range**  
flexing -30°C to +105°C  
fixed installation -50°C to +105°C
- **Nominal voltage** U<sub>0</sub>/U 300/500 V
- **Test voltage** 3000 V
- **Insulation resistance**  
min. 100 MΩm x km
- **Minimum bending radius**  
flexing 5x cable Ø  
fixed installation 3x cable Ø
- **Radiation resistance**  
up to 100x10<sup>6</sup> cJ/kg (up to 100 Mrad)

### Cable structure

- Tinned copper, fine wire conductors, Unilay with short pitch length Special TPE core insulation Black cores with continuous white numbering Green-yellow earth core (3 cores and above)
- Stranding:  
<7 cores: cores stranded in a layer with optimal lay-length around a filler as per construction  
≥7 cores: cores stranded with optimal lay-length to bunch-construction with low torsion strength, optimal selected short lay-length around a filler
- Special-TPE-O outer sheath, extruded as filler with pressure
- Sheath colour ocean blue (RAL 5020)
- with meter marking, change-over in 2009
- **TPE:** The selected tinned copper wire conductor permits the installation in aggressive environments as well as hydrogen sulfide, ammonia and sulfur dioxide

### Properties

- Microbe-resistance - TPE
- Halogen-free
- Low adhesion
- High property of alternating bending strength
- High resistant to mechanical strain
- Long life durability due to low friction-resistance
- High tensile strength, abrasion- and impact resistance at low temperature
- Use in multi-shift operations under extremely high continuous bending loads
- Abrasion resistance
- Tear resistance
- High stability
- Oil resistance
- Better chemical resistance
- UV and ozone resistance
- Higher economical solution
- Reduced Ø, results low weight of moving materials
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

### Note

- G = with green-yellow earth core;  
x = without green-yellow earth core (OZ).
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- **screened analogue type:**  
**MULTISPEED® 500-C-TPE** confer page C 24

### Application

For permanent application in drag chains for long distances, high and low speed of movements. These cables are installed in dry, moist and wet rooms and in open air with free movement without tensile stress or forced movements. These robust and abrasion resistant special control cables are installed there, where the problems appear for the application in permanent stresses e.g. in energy drag chains, industry robotics, production lines, automatic control systems and permanent movable machinery parts for multi-shift operation. For applications which go beyond standard solutions we recommend for our especially developed enquiry sheet for energy guiding systems.

Before installation in cable trays please read the instructions. Further technical details see selection table for drag chain cables, see lead text.

CE – The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part No.	No. cores x cross-sec. mm <sup>2</sup>	Outer ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.	Part No.	No. cores x cross-sec. mm <sup>2</sup>	Outer ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.
24191	2 x 0,5	4,3	9,6	42,0	20	24199	2 x 0,75	5,0	14,4	47,0	18
24192	3 G 0,5	4,6	14,4	49,0	20	24200	3 G 0,75	5,2	21,6	55,0	18
24193	4 G 0,5	5,0	19,0	63,0	20	24201	4 G 0,75	5,6	29,0	70,0	18
24194	5 G 0,5	5,4	24,0	70,0	20	24202	5 G 0,75	6,3	36,0	74,0	18
24195	7 G 0,5	9,0	33,6	90,0	20	24203	7 G 0,75	10,3	50,0	95,0	18
24196	12 G 0,5	9,7	58,0	134,0	20	24204	12 G 0,75	11,0	86,0	174,0	18
24197	18 G 0,5	11,8	86,0	209,0	20	24205	18 G 0,75	13,6	130,0	261,0	18
24198	25 G 0,5	13,4	120,0	270,0	20	24206	25 G 0,75	15,3	180,0	290,0	18
						24207	36 G 0,75	18,6	260,0	419,0	18
						24208	42 G 0,75	21,0	302,0	614,0	18

Dimensions and specifications may be changed without prior notice. (RC02)

Continuation ►

# MULTISPEED® 500-TPE high flexible, safety against high bending

in drag chain systems, low torsion, halogen-free, meter marking



Part No.	No. cores x cross-sec. mm <sup>2</sup>	Outer ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.	Part No.	No. cores x cross-sec. mm <sup>2</sup>	Outer ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.
24209	2 x 1	5,2	19,2	50,0	17	24224	4 G 2,5	8,8	96,0	179,0	14
24210	3 G 1	5,4	29,0	60,0	17	24225	5 G 2,5	9,8	120,0	230,0	14
24211	4 G 1	5,9	38,0	74,0	17	24226	7 G 2,5	16,1	168,0	294,0	14
24212	5 G 1	6,7	48,0	86,0	17	24227	12 G 2,5	17,5	288,0	510,0	14
24213	7 G 1	11,0	67,0	114,0	17	24228	18 G 2,5	21,4	432,0	722,0	14
24214	12 G 1	11,8	115,0	210,0	17	24229	25 G 2,5	24,0	600,0	950,0	14
24215	18 G 1	14,6	173,0	291,0	17	24230	4 G 4	10,3	154,0	197,0	12
24216	25 G 1	16,5	240,0	380,0	17	24231	4 G 6	11,9	231,0	320,0	10
24043	41 G 1	22,0	394,0	510,0	2	24232	5 G 6	13,4	289,0	394,0	10
24217	3 G 1,5	6,4	43,0	84,0	16	24233	4 G 10	14,7	387,0	520,0	8
24218	4 G 1,5	7,0	58,0	108,0	16	24234	4 G 16	20,0	517,0	784,0	6
24219	5 G 1,5	7,8	72,0	126,0	16	24235	4 G 35	24,9	1344,0	1711,0	2
24220	7 G 1,5	13,0	101,0	169,0	16						
24221	12 G 1,5	14,1	173,0	299,0	16						
24222	18 G 1,5	17,1	259,0	460,0	16						
24223	25 G 1,5	19,3	360,0	640,0	16						

Dimensions and specifications may be changed without prior notice. (RC02)

## Conduits

### Corrugated tubes

for standard applications  
for larger sizes  
scissile corrugated tubes  
conduit glands

### High flexible conduits

plastic conduits with spiral spring  
metal conduits  
conduits glands

### Conduit for heavy mechanical duty

metal conduits with plastic sheat  
plastic conduits  
conduits glands for metal conduits



You can find conduits in our catalogue Cable Accessories.  
Request it now at [www.helukabel.de](http://www.helukabel.de)

