

ANHUI FEICHUN SPECIAL CABLE CO., LTD.

TROMMELFLEX-M-PUR D2X11Y



Flexible Low Voltage Reeling Cable | 0.6/1 kV | Halogen-Free PUR Sheath

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APPLICATION & DESIGN PURPOSE

TROMMELFLEX-M-PUR is a flexible low voltage reeling cable with optimized dimensions and flame retardant, halogen-free polyurethane outer sheath. The cable is used as power supply for underground mining and tunnelling equipment and designed for frequently changing dynamic loads, such as reeling operation on drilling machines, scoops and LHD's (Load-Haul-Dump vehicles). This cable is specifically engineered to withstand the high mechanical stresses caused by reeling application and the abrasion to be expected in trailing operation in harsh underground mining environments.

STANDARDS & APPROVALS

DIN EN 60228 / IEC 60228 / VDE 0295

Conductor standards

DIN VDE 0298-300

Core identification

IEC 60502-1

Compound specifications

DIN VDE 0298-4

Electrical parameters

DIN EN 60332-1-2 / IEC 60332-1-2

ELECTRICAL PARAMETERS

Rated Voltage U_0/U (U_m)

0.6/1 (1.2) kV

Test Voltage

2.5 kV

AC Test Voltage (Control Cores)

2 kV

Nominal Voltage U

1,000 V

THERMAL PARAMETERS

Max. Conductor Temperature

90 °C

Max. Conductor Temperature at Short Circuit

250 °C

Ambient Temperature Fix Installation (min)

-40 °C

Ambient Temperature Fix Installation (max)

80 °C

Ambient Temperature Flexible Installation
(min)

-30 °C

Ambient Temperature Flexible Installation
(max)

80 °C

CHEMICAL PARAMETERS

Halogen Free

Yes - Environmentally friendly

Ozone Resistance

Yes

Resistant to UV

Yes

Max. Water Depth

10 m

MECHANICAL PARAMETERS

Torsional Stress

+/- 50 °/m

Permanent Tensile Strength

20 N/mm²

Travel Speed - Reeling Operation Underground

60 m/min

Bending Radius - Fixed Installation

4 x D (acc. to VDE 0298-3)

Bending Radius - Reeling Operation

8 x D

CABLE CONSTRUCTION DETAILS

1

Conductor

Finely stranded copper, bare, class 5 - provides excellent flexibility and conductivity for dynamic applications

2

Core Insulation

Cross-linked polyethylene (XLPE) - offers superior electrical insulation properties and heat resistance

3

Control Cores

Color-coded: Blue and White for easy identification during installation and maintenance

4

Split Earth Conductor

Integrated grounding conductor for safety and electromagnetic compatibility

5

Core Arrangement

Three main conductors laid-up together with split earth conductor and control cores in the interstices. Cores twisted with very short length of lay for enhanced flexibility. Main cores: Brown, Black, Grey

6

Inner Sheath

Halogen-free polymer - provides mechanical protection and environmental resistance

7

Outer Sheath

Polyurethane (PUR) - flame retardant, halogen-free, exceptional abrasion resistance and flexibility for demanding mining applications

TECHNICAL SPECIFICATIONS - TROMMELFLEX-M-PUR

D2X11Y 0.6/1KV

Basic Construction	Conductor Ø (mm)	Cable Ø min (mm)	Cable Ø max (mm)	Cable Weight (kg/km)	Max. Tensile Strength (N)	Bending Radius Moving (min) (mm)	Conductor Resistance at 20°C (Ω/km)	Current Carrying Capacity (A)
3 x 25 + 3 G 6 + 2 x 1	6.2	22.5	24	1,130	1,500	192	0.78	131
3 x 35 + 3 G 6 + 2 x 1,5	7.8	26.5	28	1,530	2,100	224	0.554	162
3 x 50 + 3 G 10 + 2 x 1,5	9.6	30	32	2,160	3,000	256	0.386	202
3 x 70 + 3 G 16 + 2 x 1,5	11.1	35	37	3,050	4,200	296	0.272	250
3 x 95 + 3 G 16 + 2 x 1,5	12.6	39.5	42	3,690	5,700	336	0.206	302
3 x 120 + 3 G 25 + 2 x 1,5	14.8	44	46.5	4,810	7,200	372	0.161	352
3 x 150 + 3 G 25 + 2 x 1,5	16	49	52	5,780	9,000	416	0.129	404
3 x 185 + 3 G 35 + 2 x 1,5	17.7	53.5	56	7,300	11,100	448	0.106	461
3 x 240 + 3 G 50 + 2 x 1,5	20.2	61.5	64.5	9,600	14,400	516	0.0801	540
4 x 50	9.6	33	35	2,450	4,000	280	0.386	202
4 x 70	11.1	38.1	40.6	3,300	5,600	325	0.272	250
4 G 70 + 2 x (10 x 2,5) + 1 x (8 x 1,5)C	11.1	62	66	5,300	5,600	528	0.272	250

Key Features & Benefits

✓ Optimized for Mining Applications

Specifically designed for drilling machines, scoops, and LHD vehicles in underground mining operations

✓ Exceptional Flexibility

Class 5 finely stranded copper conductors with short lay length ensure superior flexibility for reeling applications

✓ Halogen-Free & Flame Retardant

Environmentally friendly PUR outer sheath provides safety without toxic fumes in case of fire

✓ High Mechanical Strength

Engineered to withstand frequent reeling operations and harsh trailing conditions in mining environments

✓ Wide Temperature Range

Operates reliably from -40°C to +80°C in fixed installations and -30°C to +80°C in flexible applications

✓ Water Resistant

Suitable for use in wet conditions up to 10 meters water depth

