

AS/NZS 2802 TYPE 441 (Class 1)

YARIİLETKEN EKranLI MADEN KABLOSU (KAPALI KÖMÜR MADENLERİ HARİÇ)
SEMICONDUCTIVE SCREENED MINING CABLE (EXCEPT FOR UNDERGROUND COAL MINES)

3.3-22 kV

KONSTRÜKSİYON AÇIKLAMASI / CONSTRUCTION DESCRIPTION

3 faz damarı ile aralarına yerleştirmiş 3 toprak damarı, merkezi bir kumanda damarı içeren yarıiletken taşıyıcı fitil etrafında bükülür ve tüm damarlar yarıiletken dolgu ile ekranlanır. Dolgu ve dış kılıf arasında mukavemet arttırıcı ip örgü mevcuttur.
3 phase cores and 3 interstitial earth cores laid up around a semiconductive cradle containing a central pilot core. All cores are screened by semiconductive filler as well. Contains open weave braid reinforcement layer.

KABLO YAPISI

- 1- İLETKEN** : Elektrolitik, kalaylı çoklu bükülmüş esnek bakır tel. (Rope lay) AS/NZS 1125-2.10
2- AYIRICI : Faz iletkenlerinde ve toprak iletkenlerinde yarıiletken tabaka kaplı
3- İZOLASYON : Faz ve kumanda damarları XR-EP-90 (Sınıf 1, AS/NZS 3808'e göre) ile izole edilir. Toprak damarları izole edilmez
4- AYIRICI : Faz damarları izolasyonu üstünde yarıiletken tabaka
5- BÜKÜM : Faz damarlar birbirine değmeyecek ancak toprak damarlarına değecek şekilde içinde bir adet kumanda damarı bulunan yarıiletken fitil etrafına sarılarak bükülür
6- DOLGU MALZEMESİ : Yarıiletken elastomerik bileşik
7- AYIRICI : Mukavemet arttırıcı aralıklı örgü ip
8- DIŞ KILIF : Ekstra ağır hizmete yönelik elastomer dış kılıf (AS/NZS 3808'e göre)

CABLE STRUCTURE

- 1- CONDUCTOR** : Electrolytic, multiple-stranded circular flexible tinned copper wire (rope lay) AS/NZS 1125-2.10
2- SEPARATOR : Semiconducting layer over power conductors and earth conductors
3- INSULATION : Power and pilot cores are insulated with XR-EP-90 (Class 1, acc. to AS/NZS 3808). Earth cores not insulated
4- SEPARATOR : Semiconducting layer over power core insulations
5- LAYUP : Cores are laid up over a semiconducting cradle with one pilot core in the center and without contacting each other, but in contact with interstitial earth cores
6- BEDDING : Semiconducting elastomeric compound
7- SEPARATOR : Open weave braid for reinforcement
8- OUTER SHEATH : Heavy-duty elastomer outer sheath (acc. to AS/NZS 3808)



KABLO ÖZELLİKLERİ / CABLE PROPERTIES

İLGİLİ STANDARTLAR / RELATED STANDARDS
ANMA GERİLİMİ / RATED VOLTAGE
TEST GERİLİMİ / TEST VOLTAGE

: AS/NZS 2802
: 3.3/3.3 kV, 6.6/6.6 kV, 11/11 kV, 22/22 kV
: 12 kV, 22 kV, 30 kV, 45 kV

KULLANIM ALANI

Madenlerde genel kullanım içindir (kapalı kömür madenleri hariç)

APPLICATION

General use cable for mines (except for underground coal mines)

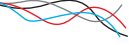
ORTAM

Açık ve kapalı maden ocaklarında kullanılır

ENVIRONMENT

Used in underground and open mines

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Nominal Kesit Cross-section mm ²	Güç damarları Power Cores				Toprak damarları Earth cores			Kumanda damarı Pilot core		Kılıf Sheath		Ağırlıklar Mass	
	Büküm Strand no/mm	İletken Çapı Conductor Diameter Nom. mm	İzolasyon kalınlığı Insulation thickness mm	İzolasyon çapı Insulation diameter Nom. mm	Büküm Strand Min.no/mm	Nominal Kesit Cross- section mm ²	Yarı iletken Kılıf Kalınlığı Semiconductive covering thickness mm ²	Büküm Strand no/mm	İzolasyon kalınlığı Insulation thickness Min.mm	Kalınlık Thickness mm	Kablo çapı Overall diameter Nom. Mm	Yaklaşık kablo ağırlığı Approx. cable weight kg/km	Bakır ağırlığı Copper weight kg/km
Type	441.3	3.3/3.3kV	Class 1	insulation									
16	126/0,40	5.7	2.2	12.4	75/0.30	5.3	1	24/0,20	0.8	4.6	43	2,400	621
25	209/0,40	7.2	2.2	13.9	75/0.30	5.3	1	24/0,20	0.8	4.9	46.9	3,050	885
35	285/0,40	8.5	2.2	15.2	75/0.30	5.3	1	24/0,20	0.8	5.2	50.3	3,600	1,173
50	380/0,40	10	2.4	17.1	114/0.30	8.1	1	40/0,20	0.8	5.7	55.5	4,450	1,686
70	203/0,67	12	2.4	19.1	36/0.67	12.7	1	40/0,20	0.8	6	60.4	5,700	2,394
95	259/0,67	13.2	2.4	20.3	45/0.67	15.9	1.2	40/0,20	0.8	6.4	63.6	6,600	3,206
120	336/0,67	15.3	2.4	22.4	57/0.67	20.1	1.2	40/0,20	0.8	6.5	68.6	7,950	4,047
150	427/0,67	17.1	2.4	24.2	77/0.67	27.2	1.2	40/0,20	0.8	6.6	72.7	9,300	5,116
185	518/0,67	19.2	2.4	26.3	91/0.67	32.1	1.4	40/0,20	0.8	6.7	77.4	10,800	6,265
240	672/0,67	21.8	2.4	28.9	112/0.67	39.5	1.4	40/0,20	0.8	6.9	83.4	13,100	8,062
300	854/0,67	24.4	2.4	31.5	144/0.67	50.8	1.4	40/0,20	0.8	7	89.2	15,700	10,116
Type	441.6	6.6/6.6kV	Class 1	insulation									
16	126/0,40	5.7	3	14	75/0.30	5.3	1	24/0,20	0.8	5	47.4	2,850	621
25	209/0,40	7.2	3	15.5	75/0.30	5.3	1	24/0,20	0.8	5.3	51.2	3,500	885
35	285/0,40	8.5	3	16.8	75/0.30	5.3	1	24/0,20	0.8	5.6	54.6	4,050	1,173
50	380/0,40	10	3	18.3	114/0.30	8.1	1.2	40/0,20	0.8	6	58.7	4,850	1,686
70	203/0,67	12	3	20.3	36/0.67	12.7	1.2	40/0,20	0.8	6.3	63.7	6,150	2,394
95	259/0,67	13.2	3	21.5	45/0.67	15.9	1.2	40/0,20	0.8	6.4	66.5	7,000	3,206
120	336/0,67	15.3	3	23.6	57/0.67	20.1	1.2	40/0,20	0.8	6.6	71.4	8,350	4,047
150	427/0,67	17.1	3	25.4	77/0.67	27.2	1.2	40/0,20	0.8	6.7	75.5	9,750	5,116
185	518/0,67	19.2	3	27.5	91/0.67	32.1	1.4	40/0,20	0.8	6.8	80.3	11,300	6,265
240	672/0,67	21.8	3	30.1	112/0.67	39.5	1.4	40/0,20	0.8	7	86.2	13,600	8,062
300	854/0,67	24.4	3	32.7	144/0.67	50.8	1.4	40/0,20	0.8	7.1	92	16,200	10,116
Type	441.11	11/11kV	Class 1	insulation									
25	209/0,40	7.2	5	19.6	75/0.30	5.3	1.2	24/0,20	0.8	6.3	62.2	4,800	885
35	285/0,40	8.5	5	20.9	75/0.30	5.3	1.4	24/0,20	0.8	6.4	65.2	5,400	1,173
50	380/0,40	10	5	22.4	114/0.30	8.1	1.4	40/0,20	0.8	6.5	68.6	6,150	1,686
70	203/0,67	12	5	24.4	36/0.67	12.7	1.4	40/0,20	0.8	6.6	73.1	7,450	2,394
95	259/0,67	13.2	5	25.6	45/0.67	15.9	1.4	40/0,20	0.8	6.8	76.2	8,450	3,206
120	336/0,67	15.3	5	27.7	57/0.67	20.1	1.4	40/0,20	0.8	6.9	80.9	9,850	4,047
150	427/0,67	17.1	5	29.5	77/0.67	27.2	1.4	40/0,20	0.8	7	85	11,300	5,116
185	518/0,67	19.2	5	31.6	91/0.67	32.1	1.4	40/0,20	0.8	7.1	89.6	12,900	6,265
240	672/0,67	21.8	5	34.2	112/0.67	39.5	1.4	40/0,20	0.8	7.3	95.7	15,400	8,062
Type	441.22	22/22kV	Class 1	insulation									
35	285/0,40	8.5	7.6	26.3	75/0.30	5.3	1.8	24/0,20	0.8	6.9	77.9	7,300	1,173
50	380/0,40	10	7.6	27.8	114/0.30	8.1	1.8	40/0,20	0.8	7	81.4	8,150	1,686
70	203/0,67	12	7.6	29.8	36/0.67	12.7	1.8	40/0,20	0.8	7.1	85.8	9,550	2,394
95	259/0,67	13.2	7.6	31	45/0.67	15.9	1.8	40/0,20	0.8	7.2	88.6	10,600	3,206
120	336/0,67	15.3	7.6	33.1	57/0.67	20.1	1.8	40/0,20	0.8	7.3	93.4	12,100	4,047
150	427/0,67	17.1	7.6	34.9	77/0.67	27.2	1.8	40/0,20	0.8	7.4	97.5	13,700	5,116
185	518/0,67	19.2	7.6	37	91/0.67	32.1	1.8	40/0,20	0.8	7.6	102.4	15,400	6,265