

## **FIREX®-II TECK90 (XLPE) -40°C 1 kV**

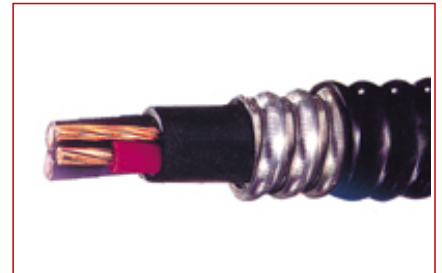
**FIREX®-II TECK90 (XLPE) 1 kV 2C**  
**Nexans ref.: 1 kV 2C**

Nexans FIREX®-II TECK90 Cables are intended for use in various primary and secondary industries, including chemical processing plants, refineries and general factory environments.

### **Description**

Even in the most demanding industrial and resource industry applications, Nexans FIREX®-II TECK90 cables have proven to have a superior service and maintenance record.

FIREX®-II TECK90 Cables utilize low acid gas, low flame spread PVC jacket compounds to ensure maximum safety to personnel and equipment in the event of fire.



### **Applications**

FIREX®-II TECK90 Cables, originally developed for use in Canadian mines, are flexible, resistant to mechanical abuse, corrosion resistant, compact and reliable. They are suitable for a wide range of applications, including ALL hazardous locations.

Industries such as pulp and paper, chemical, petroleum and other primary and secondary manufacturing industries have used FIREX®-II TECK90 Cables, particularly in areas where cables are subject to the risk of mechanical damage and chemical attack.

Commercial applications for FIREX®-II TECK90 Cables include apartment buildings and commercial complexes.

FIREX®-II TECK90 Cables can be relocated easily because they are rugged and flexible. They can be used in both dry and wet locations in open wiring, in ventilated, non-ventilated and ladder-type cable troughs, in ventilated flexible cableways, and for direct burial.

TECK90 Cables are also suitable for service entrance installations - above and below ground.

### **Highlights**

Nexans FIREX®-II TECK90 Cables are:

- Available from stock
- Versatile
- Flexible
- Resistant to Mechanical Abuse and Corrosion
- Compact and Reliable
- "HL" and "FT4" Rated per CSA
- 90°C to -40°C
- Low Acid Gas (AG14)
- Inner and outer jackets are sunlight resistant
- LEAD FREE
- RoHS compliant

### **Standards**

**National CSA C22.2 N° 131**

## FIREX®-II TECK90 (XLPE) -40°C 1 kV

### FIREX®-II TECK90 (XLPE) 1 kV 2C

#### Marking and Identification

The inner jackets of Nexans FIREX ®-II TECK90 cables are printed: SUN RES.

The outer jackets of Nexans FIREX®-II TECK90 cables are printed: (mon/year) NEXANS FIREX®-II TECK90 XLPE (-40°C) CSA LL19376 F HL FT4 AG14 SUN RES along with conductor size, number of conductors and sequential metre marking.

#### Conductor Identification:

Black, White

- 14 AWG to 2 AWG: Coloured Insulation
- 1 AWG to 500 kcmil: Coloured Stripes

#### Characteristics

Construction characteristics	
Conductor material	Copper
Electrical characteristics	
Maximum operating voltage	1 kV
Usage characteristics	
Maximum operating temperature	90 °C

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**2C 1 kV TECK90**

Conductor Size		Insulation Thickness		Inner Jacket Thickness		Approximate Diameters						Approx. Weight Al Armour		Copper Content
Power AWG or kcmil	Bonding AWG	inches	mm	inches	mm	Inner Jacket		Armour		Outer Covering		lb/kft	kg/km	kg/km
						inches	mm	inches	mm	inches	mm			
14	14	0.045	1.14	0.045	1.14	0.423	10.74	0.663	16.84	0.761	19.32	216	321	57
12	14	0.045	1.14	0.045	1.14	0.464	11.78	0.696	17.67	0.794	20.17	272	405	80
10	12	0.045	1.14	0.045	1.14	0.510	12.95	0.750	19.05	0.848	21.54	296	440	128
8	10	0.045	1.14	0.060	1.52	0.59	14.98	0.819	20.80	0.926	23.52	407	606	203
6	8	0.060	1.52	0.060	1.52	0.718	18.25	0.945	24.00	1.055	26.80	545	811	323
4	8	0.060	1.52	0.060	1.52	0.812	20.61	1.084	27.53	1.188	30.18	742	1104	469
3	6	0.060	1.52	0.080	2.03	0.902	22.91	1.177	29.90	1.306	33.17	912	1357	618
2	6	0.060	1.52	0.080	2.03	0.963	24.45	1.235	31.37	1.339	34.01	1029	1531	746
1	6	0.080	2.03	0.080	2.03	1.110	28.20	1.385	35.18	1.514	38.45	1252	1863	910
1/0	6	0.080	2.03	0.080	2.03	1.185	30.09	1.454	36.93	1.558	39.57	1451	2159	1114
2/0	6	0.080	2.03	0.080	2.03	1.263	32.09	1.533	38.94	1.641	41.68	1675	2493	1372
3/0	4	0.080	2.03	0.080	2.03	1.358	34.50	1.633	41.48	1.762	44.75	2031	3022	1770
4/0	4	0.080	2.03	0.080	2.03	1.463	37.16	1.731	43.97	1.863	47.32	2385	3549	2181
250	4	0.090	2.29	0.080	2.03	1.598	40.59	1.948	49.48	2.082	52.88	2870	4270	2542
300	4	0.090	2.29	0.080	2.03	1.699	43.15	2.049	52.04	2.183	55.44	3281	4882	3008
350	3	0.090	2.29	0.110	2.79	1.852	47.03	2.202	55.93	2.336	59.33	3837	5710	3530
400	3	0.090	2.29	0.110	2.79	1.938	49.23	2.288	58.11	2.422	61.52	4236	6303	4004
500	3	0.090	2.29	0.110	2.79	2.097	53.27	2.447	62.15	2.581	65.56	5082	7563	4934

## FIREX®-II TECK90 (XLPE) -40°C 1 kV

### FIREX®-II TECK90 (XLPE) 1 kV 2C

#### 2C 1 kV TECK Fitting Sizes and Ampacity

Conductor Size		Ampacity (A) 30°C Ambient (Notes 2, 4)			Fittings			
Power	Bonding				Appleton	T & B	CMP Products	Cooper Crouse-Hinds
AWG or kcmil	AWG	60°C	75°C	90°C				
14 (Note 3)	14	15	15	15	TMC5099	10465-TB/ST050-465	TMC075A	TECK050-3
12 (Note 3)	14	20	20	20	TMC5099	10465-TB/ST050-465	TMC075A	TECK050-3
10 (Note 3)	12	30	30	30	TMC5099	10465-TB/ST050-465	TMC075A	TECK050-3
8	10	40	50	55	TMC5099	10466/ST050-466	TMC075A	TECK050-4
6	8	55	65	75	TMC75121	10467/ST075-467	TMC100A	TECK075-5
4	8	70	85	95	TMC75121	10468/ST075-468	TMC100A	TECK075-6
3	6	85	100	115	TMC100138	10469/ST100-469	TMC125A	TECK100-7
2	6	95	115	130	TMC100138	10469/ST100-469	TMC125A	TECK100-7
1	6	110	130	145	TMC125163	10470/ST125-470	TMC150A	TECK125-8
1/0	6	125	150	170	TMC125163	10550/ST125-550	TMC150A	TECK125-8
2/0	6	145	175	195	TMC125188	10471/ST125-471	TMC150A	TECK125-10
3/0	4	165	200	225	TMC125188	10471/ST125-471	TMC200SA	TECK125-10
4/0	4	195	230	260	TMC150200	10472/ST150-472	TMC200SA	TECK125-10
250	4	215	255	290	TMC150220	10473/ST150-473	TMC200A	TECK150-12
300	4	240	285	320	TMC150220	10474/ST200-474	TMC250SA	TECK150-12
350	3	260	310	350	TMC200238	10474/ST200-474	TMC250SA	TECK200-14
400	3	280	335	380	TMC200275	10475/ST200-475	TMC250A	TECK200-15
500	3	320	380	430	TMC200275	10476/ST200-476	TMC250A	TECK200-16

**Notes:**

- 1) Where stated, "nominal" and "approximate" values are provided for information purposes only and are subject to standard manufacturing tolerances.
- 2) Based on 2012 CEC Table 2, for not more than 3 current carrying conductors in a cable or raceway.
- 3) The overcurrent protection shall not exceed 15 amperes for 14 AWG, 20 amperes for 12 AWG, and 30 amperes for 10 AWG after any corrections factors for ambient temperature and number of conductors have been applied (2012 CEC Rule 14-104(2)), or as provided for by other Rules of the 2012 CEC.
- 4) The maximum conductor temperature (used to determine the maximum conductor ampacity) shall be based on the lowest temperature rating of the electrical equipment, any wire connector, or cable (2012 CEC Rule 4-006).

#### Selling information

#### Caution Notice

In case of fire, well maintained early warning smoke detectors will give an alarm long before non-metallic coverings become combustible.

However, in spite of the widespread and long-standing use of PVC in residential and commercial buildings, all purchasers of PVC insulated/ jacketed products should be aware of the following:

- Non-metallic coverings of electrical cables can burn and may transmit fire when ignited.
- Burning non-metallic coverings may emit acid gases which are toxic and may generate dense smoke.
- Emission of acid gases may corrode metal in the vicinity; e.g. sensitive instruments and reinforcing rods in cement.