AmerCable INCORPORATED

Oil & Gas Cables

37-102

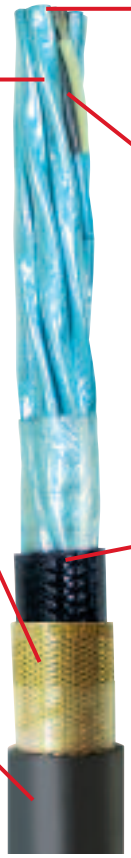
Flexible Instrumentation Cable Gexol® Insulated

Individually Shielded Pairs • 0.6/1kV • Rated 110°C

Insulation
GEXOL® cross-linked flame retardant polyolefin, meeting the requirements for Type P of IEEE 1580 and Type X110 of UL 1309/CSA 245.

Armor (Optional)
Basket weave wire armor per IEEE 1580 and UL 1309/CSA 245. Bronze standard. Aluminum or tinned copper available by request.

Sheath (Optional)
A black, arctic grade, flame retardant, oil, abrasion, chemical and sunlight resistant thermosetting compound meeting UL 1309/CSA 245 and IEEE 1580.



Conductor
Soft annealed flexible stranded tinned copper per IEEE 1580 Table 11.

Pairs
Each pair is twisted with a bare tinned drain wire. Each pair is shielded with polyester-backed aluminum foil tape to afford 100% coverage. Pair to pair isolation plus overall shield is provided.

Pair color code:
Black-White

Jacket
A black, arctic grade, flame retardant, oil, abrasion, chemical and sunlight resistant thermosetting compound meeting UL 1309/CSA 245 and IEEE 1580.

Cable available with blue jacket or stripe to signify intrinsically safe circuit.

Application

Designed and constructed for the demanding environments of offshore drilling and petroleum facilities located throughout the world.

Features

- High strand count conductors make this product much more flexible, easier to install and more resistant to vibration than Type MC, IEC spec or commercial cables.
- Gexol's lower dielectric constant and higher insulation resistance reduces electrical losses.
- Gexol's excellent resistance to moisture produces stable electrical properties throughout the life of the cable.
- In a fire condition, Gexol's nonchlorinated flame retardant system produces less toxic and less corrosive gases.
- Dual certified IEEE 1580 Type P and UL 1309/CSA 245 Type X110.
- Highest ampacity ratings: ABS 100˚C, DNV 95˚C, LRS 95˚C, Transport Canada 95˚C.
- Severe cold durability: exceeds CSA cold bend/cold impact (-40˚C/-35˚C).
- Flame retardant: IEC 332-3 Category A and IEEE 1202.
- Suitable for use in Class 1 Division 1, and Zone 1 environments (armored and sheathed).
- Optional braid armor of bronze, aluminum or tinned copper.

Ratings & Approvals

- 110˚C Temperature Rating
- American Bureau of Shipping (ABS) 99-BT5905-X
- Transport Canada 8700-20-2
- Det Norske Veritas (DNV) E-4999, E-5000, E-5001, E-5002
- Lloyd's Register of Shipping (LRS) 91/60333 (E4)
- NVE 95/1696, FAL
- UL Listed as Marine Shipboard Cable (E111461)
- United States Coast Guard November 2, 1987 / 9304
- CSA Listed as Type RW90 (LL80350)

Other certifications pending

Hawke Gland Types	Unarmored	Armored & Sheathed
Industrial & Safe Area (IP68)	121	153-X
Increased Safety "EExe"	501/421	501/453/U
Explosion Proof	710 Class 1 Div. 2 Class 1, Zone 2	753 Class 1 Div. 1 Class 1, Zone 1 & 2
Flameproof "EExd"	501/421 Zone 1 & 2	501/453/U (2 liter or < enclosures) ICG 653/U (2 liter or > enclosures) Zone 1 & 2

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Flexible Instrumentation Cable – Individually Shielded Pairs

			Unarmored		Armored (B)		Armored and Sheath (BS)	
Size AWG	Number of Pairs	Part No. 37-102	Nominal Diameter (inches)	Weight (lbs/MFt.)	Nominal Diameter (inches)	Weight (lbs/MFt.)	Nominal Diameter (inches)	Weight (lbs/MFt.)
18	1	-601	0.360	63	0.410	123	0.541	176
18	2	-602	0.551	131	0.601	204	0.732	335
18	3	-603	0.581	163	0.631	265	0.762	343
18	4	-604	0.630	195	0.680	317	0.801	410
18	5	-605	0.685	243	0.735	395	0.900	511
18	7	-606	0.742	340	0.792	457	0.957	575
18	8	-607	0.800	388	0.850	521	1.015	752
18	10	-608	0.976	495	1.026	699	1.199	874
18	12	-609	1.011	581	1.061	780	1.234	982
18	16	-645	1.121	748	1.171	833	1.344	1182
18	18	-641	1.181	824	1.231	1050	1.404	1300
18	24	-646	1.382	1069	1.432	1151	1.605	1720
16	1	-610	0.388	77	0.438	120	0.569	203
16	2	-611	0.565	160	0.615	249	0.751	377
16	3	-612	0.617	200	0.667	311	0.785	410
16	4	-613	0.671	239	0.721	389	0.886	569
16	5	-614	0.730	297	0.780	483	0.945	609
16	7	-615	0.792	416	0.842	559	1.007	703
16	8	-616	0.896	475	0.946	638	1.119	803
16	10	-617	1.047	606	1.097	787	1.270	1098
16	12	-618	1.081	711	1.131	923	1.304	1138
16	16	-619	1.207	948	1.257	1231	1.422	1517
16	18	-626	1.265	1100	1.315	1260	1.488	1570
16	20	-688	1.327	1215	1.377	1476	1.552	1894
16	24	-699	1.482	1510	1.532	1625	1.767	2065
14	1	-620	0.410	97	0.460	151	0.590	199
14	2	-621	0.621	202	0.671	315	0.802	481
14	3	-622	0.658	251	0.708	391	0.881	515
14	4	-623	0.721	301	0.771	469	0.944	633
14	5	-624	0.791	374	0.841	608	1.013	787
14	7	-625	0.905	524	0.955	704	1.128	886
14	8	-630	0.979	498	1.029	803	1.202	1011
14	10	-627	1.148	747	1.198	1003	1.371	1196
14	12	-628	1.186	896	1.236	1203	1.409	1434

Cable diameters shown as nominal are subject to a ±5% manufacturing tolerance

VALUES:

#18 Pairs

Capacitance (nF/1000 feet) = 28
Inductance (mH/1000) = 0.22
Resistance (Ohms/1000 feet) = 7.21 (@ 20°C)

#16 Pairs

Capacitance (nF/1000 feet) = 32
Inductance (mH/1000) = 0.20
Resistance (Ohms/1000 feet) = 4.52 (@ 20°C)

#14 Pairs

Capacitance (nF/1000 feet) = 37
Inductance (mH/1000) = 0.19
Resistance (Ohms/1000 feet) = 2.85 (@ 20°C)

Ordering Gexol Oil & Gas Cables
Example:
- Instrumentation cable
- 0.6/1kV
- #14 AWG
- bronze armored & sheathed

37–102 – 620 BS

- 37–102: AmerCable Gexol Oil & Gas Prefix
- 620: Specific Cable Number (from charts)
- BS: Armor Requirement — BS – armored & sheathed; Blank – no armor

GEXOL® is a registered trademark of AmerCable Incorporated

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