

INVENTRO POLYMERS

ABILITY TO DEFINE

MANUFACTURER AND STOCKIEST OF RUBBER & TEFLON MOLDING ITEMS

TEFLON WIRE CATALOGUE



PTFE INSULATED HOOK UP WIRES



MULTI CORE WIRES AND CABLE



CO- AXIAL CABLES



SPECIALTY CABLE



CO-AXIAL CABLE

TRI-AXIAL CABLE



SPECIAL CO – AXIAL CABLES



SPECIAL WIRES



PTFE SLEEVES

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PRODUCT PROFILE

WIRES AND CABLE

- PTFE INSULATED SILVER / NICKEL/ TIN PLATED AND BARE COPPER HOOK UP WIRE. OUR PTFE INSULATED SPC/ TPC/ NPC WIRES, ARE BEING USED IN ELECTRONIC EQUIPMENTS, DEFENCE EQUIPMENTS, RAILWAYS, AIRCRAFTS, AEROSPACE RESEARCH, RADAR, SATELLITES, HEAT SENSING LEADS, ATOMIC POWER STATION, TELEPHONE – EXCHANGE, ETC.
- MULTI – CORE TWISTED PTFE INSULATED WIRES / CABLE 2 CORE, 3 CORE, 4 CORE AND 6 CORE, ETC.
- MULTI – CORE TWISTED PTFE INSULATED WIRES / CABLES WITH OUTER SHEATHED / JACK OF PTFE, PVC AND FRLS, ETC.
- SINGLE CORE AND MULTI – CORE TWISTED PTFE INSULATED WIRE / CABLE WITH SHIELDING OF S.S., SPC AND FIBER GLASS, ETC.
- HIGH VOLTAGE “CR” INSULATED WIRES AND CABLE.
- RTD WIRES AND CABLES.
- RF CO – AXIAL CABLES RG 196A/U, RG 188 A/U, RG 187 A/U, RG 195 A/U, RG 178U, RG 179U, RG 316 AS PER MIL C-17 OR JSS 51100.

PTFE SLEEVES

- WE MANUFACTURE PTFE SLEEVES CONFIRMING TO JSS SPECIFICATION, C-DOT/ BEL SPECIFICATION AND ALL SIZE AS PER CUSTOMER’S REQUIREMENT.

COLOUR OPTIONS

- RED, YELLOW, BLUE, BLACK, WHITE, GREEN, ORANGE, PINK, VIOLET, GREY, BROWN, BIO-COLOURS AND TRIO – COLOURS.

PROPERTIES OF PTFE WIRES/ SLEEVES

- HIGH OPERATING TEMP. -65°C TO 260°C
- LOW DIELECTRIC CONSTANT
- LOW DISSIPATION FACTOR ($<0.0003>$)
- HIGH SURFACE RESISTANCE
- UNAFFECTED AT SOLDERING TEMPERATURE
- FAIR CORONA RESISTANCE
- SUITABLE FOR HIGH FREQUENCY APPLICATIONS.
- INERT TO CHEMICAL ATTACK
- MOISTURE PROOF
- FIRE (FLAME) NON-PROROGATING (FIRE-PROOF).
- INERT TO FUNGUS AND MOULD GROWTH
- SUITABLE FOR VERY WIDE FREQUENCY RANGE (DC TO ABOVE 10000 MHz.)
- EXCELLENT FLEX LIFE AND UNAFFECTED BY OUT DOORS EXPOSURE TO UNLIMITED PERIOD.



1. SINGLE STRAND PTFE INSULATED SILVER/NICKEL PLATED COPPER CONDUCTOR HOOK-UP WIRES (UNSCREENED)

S.NO.	SIZE(AWG)	NOMINAL CONDUCTOR DIA. (MM)	NOMINAL DIA. OF INSULATED CABLE(MM)		
			ET(300 V)	E(600 V)	EE(1000 V)
1	30/1	0.25	0.56	0.75	1.00
2	28/1	0.32	0.63	0.84	1.09
3	26/1	0.40	0.71	0.90	1.15
4	24/1	0.50	0.81	1.00	1.25
5	22/1	0.65	0.95	1.15	1.40
6	20/1	0.80	1.10	1.30	1.53

2. MULTISTRAND PTFE INSULATED SILVER/NICKEL PLATED COPPER CONDUCTOR SINGLE CORE CABLES (UNSCREENED).

S.NO.	SIZE (AWG/NO. OF STRANDS)	NOMINAL CONDUCTOR DIA.	NOMINAL DIA. OF INSULATED CABLE (MM).		
			ET(300 V)	E(600 V)	EE(1000 V)
1	32/7	0.24	0.56	0.74	1.00
2	30/7	0.30	0.61	0.81	1.07
3	28/7	0.39	0.69	0.89	1.14
4	26/7	0.48	0.79	0.99	1.24
5	26/19	0.50	0.79	0.99	1.24
6	24/7	0.60	0.91	1.12	1.37
7	24/19	0.65	0.91	1.12	1.37
8	22/7	0.75	1.07	1.27	1.52
9	22/19	0.80	1.07	1.27	1.52
10	20/7	0.96	1.27	1.47	1.73
11	20/19	1.00	1.27	1.47	1.73
12	18/7	1.20	-	1.75	2.00
13	18/19	1.25	-	1.75	2.00
14	16/19	1.45	-	2.03	2.25
15	16/37	1.40	-	2.00	2.20
16	15/19	1.60	-	2.15	2.40
17	14/19	1.80	-	2.42	2.69
18	14/37	1.75	-	2.35	2.60
19	13/19	2.00	-	2.60	2.85
20	12/19	2.25	-	2.90	3.17
21	12/37	2.24	-	2.85	3.12
22	11/19	2.50	-	3.15	3.40
23	10/19	3.25	-	3.80	4.10
24	10/37	2.80	-	3.40	3.68

**3. PTFE INSULATED MULTI STRAND MULTI CORE TWISTED ONLY CABLES
(SILVER/NICKEL PLATED COPPER CONDUCTOR)**

S.No.	SIZE (AWG)	CONDUCTOR DIA.(mm)	NOMINAL DIA. OF FINISHED CABLE.								
			300 V			600 v			1000 V		
			2-CORE	3-CORE	4-CORE	2-CORE	3-CORE	4-CORE	2-CORE	3-CORE	4-CORE
1	32/7	0.24	1.03	1.11	1.29	1.48	1.59	1.79	2.06	2.22	2.49
2	30/7	0.30	1.15	1.24	1.38	1.60	1.75	1.93	2.18	2.35	2.63
3	28/7	0.39	1.27	1.37	1.53	1.72	1.85	2.07	2.30	2.48	2.84
4	26/7	0.48	1.45	1.57	1.72	1.90	2.05	2.30	2.48	2.68	3.00
5	24/19	0.65	1.75	1.89	2.12	2.20	2.37	2.66	2.78	3.00	3.36
6	22/19	0.80	2.05	2.21	2.49	2.50	2.75	3.02	3.08	3.33	3.72
7	20/19	1.00	2.55	2.75	3.08	3.00	3.24	3.63	3.58	3.87	4.33
8	18/19	1.25	-	-	-	3.50	3.78	4.23	4.08	4.41	4.93
9	16/19	1.45	-	-	-	-	-	-	4.62	4.99	5.59

**4. PTFE INSULATED MULTISTRAND SINGLE AND MULTI CORE SCREENED CABLE
(UNSHEATHED)
(SILVER/NICKEL COATED CONDUCTOR AND SCREEN)**

S.No.	SIZE (AWG)	CONDUCTOR DIA.(mm)	NOMINAL DIA. OF FINISHED CABLE.											
			300 V				600 v				1000 V			
			1-CORE	2-CORE	3-CORE	4-CORE	1-CORE	2-CORE	3-CORE	4-CORE	1-CORE	2-CORE	3-CORE	4-CORE
1	32/7	0.24	0.96	1.48	1.56	1.68	1.19	1.93	2.09	2.24	1.48	2.51	2.67	2.94
2	30/7	0.30	1.02	1.60	1.69	1.84	1.25	2.05	2.17	2.38	1.54	2.63	2.80	3.08
3	28/7	0.39	1.08	1.72	1.82	1.98	1.31	2.17	2.30	2.52	1.60	2.75	2.93	3.22
4	26/7	0.48	1.17	1.90	2.01	2.20	1.40	2.35	2.50	2.75	1.69	2.93	3.13	3.45
5	24/19	0.65	1.32	2.20	2.34	2.57	1.55	2.65	2.82	3.11	1.84	3.23	3.45	3.81
6	22/19	0.80	1.47	2.50	2.66	2.93	1.70	2.95	3.15	3.47	1.99	3.53	3.78	4.17
7	20/19	1.00	1.72	3.00	3.20	3.53	1.95	3.15	3.69	4.08	2.24	4.03	4.32	4.78
8	18/19	1.25	-	-	-	-	2.20	3.95	4.23	4.68	2.49	4.53	4.83	5.38
9	16/19	1.45	-	-	-	-	-	-	-	-	2.76	5.07	5.44	6.04
10	14/19	1.80	-	-	-	-	-	-	-	-	2.99	5.53	5.93	6.59
11	12/19	2.25	-	-	-	-	-	-	-	-	3.56	6.67	7.17	7.97
12	10/37	2.80	-	-	-	-	-	-	-	-	4.11	7.77	8.35	9.16

**5. PTFE INSULATED MULTISTRAND SINGLE / MULTI CORE SCREENED & PTFE SHEATHED CABLE
(SILVER/NICKEL COATED CONDUCTOR AND SCREEN)**

S.No.	SIZE (AWG)	Conductor Dia (mm)	NOMINAL DIA OF FINISHED CABLE (mm)											
			300 V				600 V				1000V			
			1-CORE	2-CORE	3-CORE	4-CORE	1-CORE	2-CORE	3-CORE	4-CORE	1-CORE	2-CORE	3-CORE	4-CORE
1	32/7	0.24	1.28	1.80	1.88	2.00	1.69	2.43	2.54	2.74	1.98	3.01	3.17	3.44
2	30/7	0.30	1.33	1.92	2.00	2.15	1.75	2.55	2.67	2.88	2.04	3.13	3.30	3.58
3	28/7	0.39	1.38	2.02	2.12	2.32	1.81	2.67	2.80	3.02	2.10	3.25	3.43	3.73
4	26/7	0.49	1.48	2.21	2.32	2.52	1.90	2.85	3.00	3.25	2.19	3.43	3.63	3.95
5	24/19	0.65	1.62	2.51	2.65	2.88	2.05	3.15	3.32	3.61	2.34	3.73	3.95	4.31
6	22/19	0.80	1.79	2.81	2.98	3.25	2.20	3.45	3.65	3.97	2.49	4.03	4.28	4.67
7	20/19	1.00	1.99	3.27	3.47	3.80	2.45	3.95	3.98	4.58	2.74	4.53	4.82	5.28
8	18/19	1.25	-	-	-	-	2.70	4.45	4.73	4.68	2.99	5.03	5.36	5.88

6. RF CO-AXIAL CABLES

INNER CONDUCTOR: SPC COVERED STEEL
SHIELD: SINGLE BRAID OF SPC WIRE

INSULATION: PTFE
SHEATH: PTFE

EQUIVALENT JSS NO.	TYPE	SIZE OF INNER CONDUCTOR mm/in.	DIA OF INSULATION mm/in	DIA OF SPC BRAND SHEILD mm/in	DIA OF P.T.F.E. SHEATING mm/in	NOMINAL WEIGHT kg/kilometer
WRC - 55	RG 187 AU	7/0.100 7/0.004	1.600 0.063	2.060/ 0.081	2.790/ 0.112	16
WRC - 46	RG 188 AU	7/0.170 7/0-0067	1.520 0.060	1.980/ 0.078	2.798/ 0.112	16
WRC - 59	RG 195 AU	7/0.100 7/0-004	2.590 0.063	3.050/ 0.120	3.940/ 0.158	30
WRC - 45	RG 196 AU	7/0.100 7/0-004	0.860 0.034	1.320/ 0.052	2.030/ 0.081	8.5

7. SLEEVES CONFORMING TO JSS SPECIFICATIONS

S NO.	1	2	3	4	5	6	7	8	9
NOMINAL ID IN MM	0.50	0.75	1.00	1.50	1.50	2.00	2.00	2.50	3.00
NOMINAL WALL THICKNESS MM	0.25	0.25	0.30	0.30	0.40	0.30	0.40	0.40	0.40
OVER ALL DIA. IN MM.	1.00	1.25	1.60	2.10	2.30	2.60	2.80	3.30	3.80
S NO.	10	11	12	13	14	15	16	17	18
NOMINAL ID IN MM	3.50	4.00	5.00	6.00	7.00	8.00	9.00	10.00	12.00
NOMINAL WALL THICKNESS MM	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.0
OVER ALL DIA. IN MM.	4.50	5.00	6.00	7.00	8.00	9.00	10.00	11.00	14.00

COMPARATIVE PROPERTIES OF VARIOUS INSULATING MATERIALS

PROPERTIES	Oxidation resistance	Heat resist	Oil resist	Low temperature resistance	Weather sun resistance	Ozone resistance	Abrasion resistance	Electrical properties	Flame resist	Nuclear radiation
PVC	E	G-E	F	P-G	G-E	E	F-G	F-G	E	F
LDPE	E	G	G-E	E	E	E	G	E	P	G-E
Cellular PE	E	G	G	E	E	E	F	E	P	G
HDPE	E	E	G-E	E	E	E	E	E	P	G-E
Polypropylene	E	E	F	P	E	E	F-G	E	P	F
Cellular Polypropylene	E	E	F	P	E	E	F-G	E	P	F
Polyurethane	E	G	E	G	G	E	O	P	P	G
Nylon	E	E	E	G	E	E	E	P	P	F-G
CPE	E	E	E	E	E	E	E-O	E	E	O
Plenum PVC	E	G-E	F	P-G	G	E	F-G	G	E	F
FEP	O	O	O	O	O	E	E	E	O	P-G
ETFE	E	E	E	E	E	E	E	E	G	E
PTFE	O	O	E-O	O	O	O	O	E	E	E

E= EXCELLENT ; G= GOOD ; F= FAIR ; P= POOR.

THERMAL PROPERTIES OF VARIOUS INSULATING MATERIAL.

°C	MATERIAL	°C
-20°	PVC STANDARD	80°
-55°	PVC PREMIUM	105°
-60°	POLYETHYLENE	90°
-40°	POLYPROPYLENE	105°
-40°	CROSS LINK POLYETHYLENE	130°
-60°	EPDM RUBBER	150°
-40°	HYPALON (CSPE)	105°
-50°	NEOPRENE	90°
-40°	RUBBER	75°
-65°	SILICON BRAID LESS	150°
-65°	SILICON W/ BRAID	200°
-70°	TEFLON	260°

FOR MORE INFORMATION PLEASE CONTACT

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