

# Naviflex Cables Industries

ISO 9001:2008 Certified Co.



**NAVIFLEX<sup>®</sup> CABLES**

**PVC ELECTRIC (HEAVY DUTY) CABLE**

**IS:1554(PT.-1)/1988**



**AN ISO 9001:2008 CERTIFIED Co.**

# Our Product & Ranges of PVC INSULATED & SHEATHED ARMoured/UNARMoured (HD) Cables, 1.1 KV GRADE

## Range :-

Copper/Aluminium Conductor (Armoured/Unarmoured)

1.5sqmm x 1 Core to 1000sqmm x 1 Core

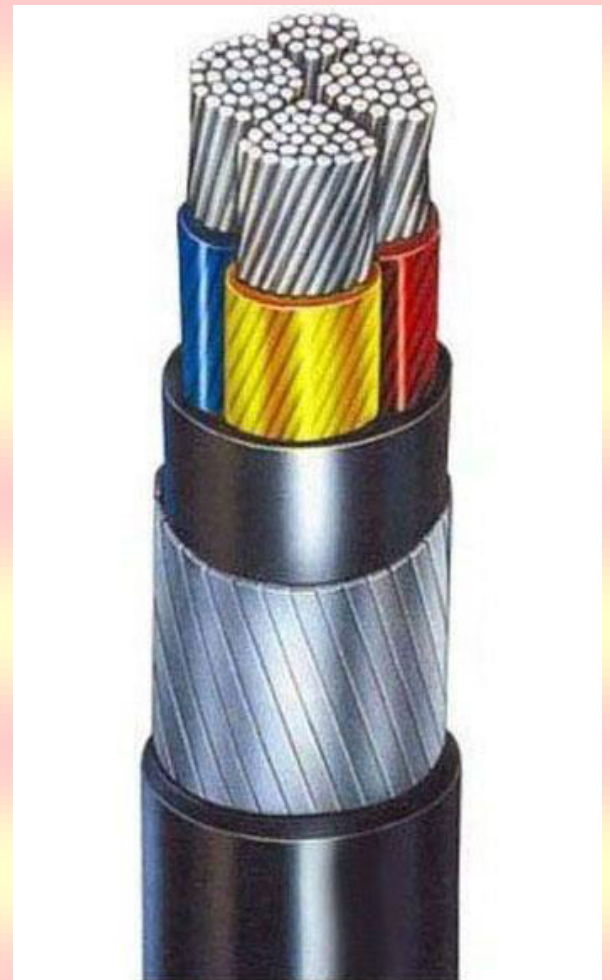
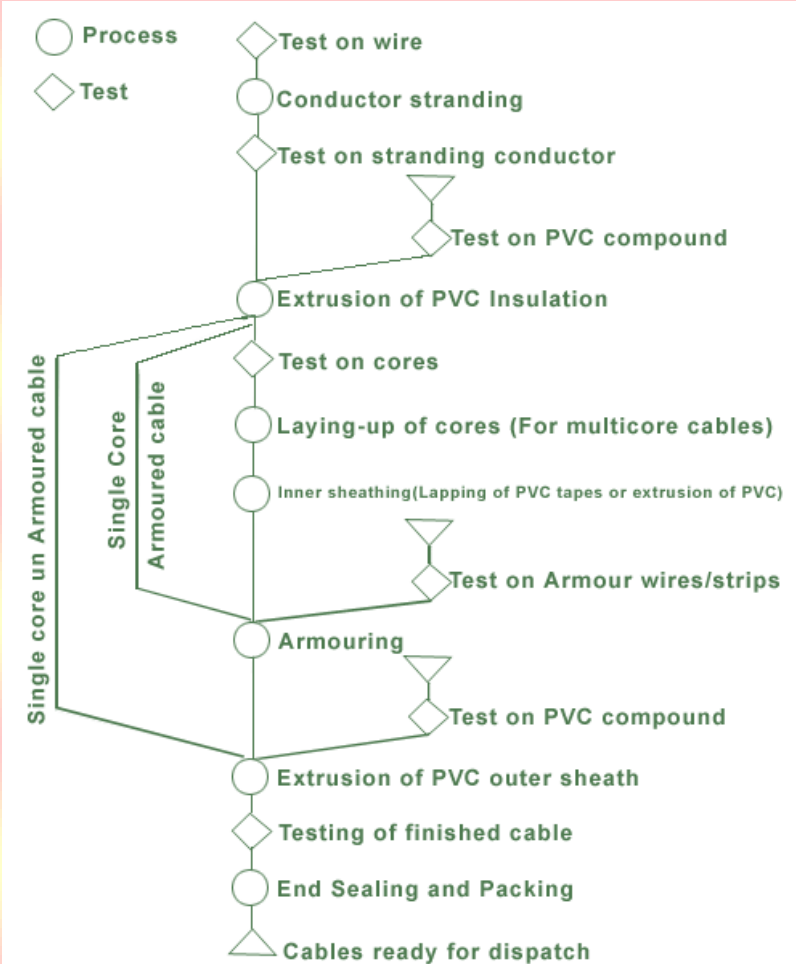
1.5sqmm x 2 Core to 630sqmm x 2 Core

1.5sqmm x 3 Core to 630sqmm x 3 Core

1.5sqmm x 4 Core to 630sqmm x 4 Core

25sqmm x 3.5 Core to 630sqmm x 3.5 Core

### MANUFACTURING PROCESS



## Constructions

**Reference Specifications :** IS:1554(Part-1)1988

**Voltage Grade :** 1100 Volts

**Conductor Aluminium :** EC Grade Aluminium

**Copper :** Electrolytic Grade Bare Annealed Copper  
(as per Class 1 & 2 of IS:8130/1984)

**Insulation :** PVC (TYPE-A OR TYPE-C)

**Colour of Insulation**

**Single Core Cables :** Red, Yellow, Blue, White or Natural or any colour as per customer's requirement.

**Two Core Cables :** Red & Black

**Three Core Cables :** Red, Yellow & Blue

**Four Core Cables :** Red, Yellow, Blue & Black

**Laying up :** The Cores are laid up together with suitable right hand Lay

**Inner Sheath :** PVC

**Armouring :** Galvanised Steel Wires/Strips  
(In Single Core Cable Aluminium Wires/Strips used)

**Outer Sheath :** PVC Type ST-1 OR ST-2

**PRODUCT CODE (As per IS:1554(Pt.-1)/1988**

**CONSTITUENT**

**CODE**

<b>Aluminium Conductor</b>	<b>A</b>
<b>PVC Insulation</b>	<b>Y</b>
<b>Round Steel Wire</b>	<b>W</b>
<b>Flat Steel strip Armoured</b>	<b>F</b>
<b>Double round steel wire armoured</b>	<b>WW</b>
<b>Double flat steel strip armoured</b>	<b>FF</b>
<b>Non Magnetic (Al) Round wire armoured</b>	<b>Wa</b>
<b>Non Magnetic (Al) flat strip armoured</b>	<b>Fa</b>
<b>PVC Outer sheath</b>	<b>Y</b>


**1.1 KV SINGLE CORE ALUMINIUM CONDUCTOR, PVC INSULATED, HARD DRAWN ALUMINIUM ARMoured / UNARMoured CABLES CONFORMING TO IS:1554 (PART-I)/1988**

Nominal Area of Conductor	UNARMoured CABLES				ARMoured CABLES								
	Ayy				Single Layer-wire (AYWay)					Single Layer – Strip (AYFaY)			
	Nominal Thickness of Insulation	Nominal Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable	Nominal Thickness of Insulation	Nominal Diameter of armour wire	Minimum Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable	Nominal Thickness of Armour Strip	Minimum Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable
Sq.mm	mm	mm	mm	Kg/km	mm	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km
6	1.0	1.8	9.0	100	1.3	1.4	1.24	12.0	180	-	-	-	-
10	1.0	1.8	10.	120	1.3	1.4	1.24	13.0	200	-	-	-	-
16	1.0	1.8	11.0	160	1.3	1.4	1.24	14.0	250	-	-	-	-
25	1.2	1.8	13.0	210	1.5	1.4	1.24	15.0	300	-	-	-	-
35	1.2	1.8	14.0	250	1.5	1.4	1.24	16.0	350	-	-	-	-
50	1.4	1.8	16.0	300	1.7	1.4	1.24	18.0	450	-	-	-	-
70	1.4	1.8	17.0	400	1.7	1.4	1.4	20.0	550	-	-	-	-
95	1.6	1.8	19.0	500	1.9	1.6	1.4	22.0	700	0.80	1.4	21.0	650
120	1.6	2.0	21.0	600	1.9	1.6	1.4	24.0	800	0.80	1.4	23.0	750
150	1.8	2.0	23.0	750	2.1	1.6	1.4	26.0	950	0.80	1.4	24.0	900
185	2.0	2.0	25.0	900	2.3	1.6	1.4	29.0	1100	0.80	1.4	27.0	1150
240	2.2	2.0	28.0	1100	2.5	1.6	1.56	32.0	1400	0.80	1.4	30.0	1300
300	2.4	2.0	30.0	1350	2.7	1.6	1.56	34.0	1650	0.80	1.56	32.0	1600
400	2.6	2.2	35.0	1700	3.0	2.0	1.56	39.0	2100	0.80	1.56	37.0	1950
500	3.0	2.2	38.0	2150	3.4	2.0	1.72	42.0	2700	0.80	1.56	40.0	2400
630	3.4	2.4	43.0	2750	3.9	2.0	1.88	48.0	3300	0.80	1.72	45.0	3100
800	3.4	2.4	48.0	3300	3.9	2.0	1.88	52.0	4000	0.80	1.88	49.0	3700
1000	3.4	2.6	52.0	4100	3.9	2.5	2.04	59.0	4900	0.80	2.04	54.6	4600

**1.1 KV TWO CORE ALUMINIUM CONDUCTOR, PVC INSULATED, ARMoured / UNARMoured  
CABLES CONFORMING TO IS:1554 (PART-I)/1988**

Nominal Area of Conductor	UNARMoured CABLES					ARMoured CABLES							
	Ayy					Single Layer-wire (AYWY)				Single Layer – Strip (AYFY)			
	Nominal Thickness of Insulation	Nominal Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable	Nominal Diameter of armour wire	Minimum Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable	Nominal Thickness of Armour Strip	Minimum Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable
Sq.mm	mm	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km
6	1.0	0.3	1.8	17	300	1.4	1.24	19	660	-	-	-	-
10	1.0	0.3	1.8	18	400	1.4	1.24	20	750	-	-	-	-
16	1.0	0.3	1.8	17	330	1.6	1.40	20	750	0.8	1.40	18	580
25	1.2	0.3	2.0	19	450	1.6	1.40	22	900	0.8	1.40	20	700
35	1.2	0.3	2.0	21	550	1.6	1.40	23	1030	0.8	1.40	22	800
50	1.4	0.3	2.0	24	700	1.6	1.56	26	1300	0.8	1.40	25	1000
70	1.4	0.3	2.0	26	850	1.6	1.56	29	1500	0.8	1.56	27	1200
95	1.6	0.4	2.2	30	1050	2.0	1.56	33	2050	0.8	1.56	30	1550
120	1.6	0.4	2.2	32	1300	2.0	1.72	55	2400	0.8	1.56	32	1800
150	1.8	0.4	2.4	34	1600	2.0	1.72	37	2760	0.8	1.72	35	2100
185	2.0	0.5	2.4	38	2000	2.0	1.88	41	3200	0.8	1.88	38	2500
240	2.2	0.5	2.6	42	2500	2.5	2.04	47	4200	0.8	2.04	45	3100
300	2.4	0.6	2.8	46	3000	2.5	2.20	50	5000	0.8	2.2	48	3700
400	2.6	0.7	3.2	52	3800	3.15	2.52	58	6600	0.8	2.36	53	4500
500	3.0	0.7	3.4	54	4800	3.15	2.84	64	8000	0.8	2.68	56	5600
630	3.4	0.7	3.8	56	6000	4.0	3.0	72	11000	0.8	2.84	66	6900

**1.1 KV THREE CORE ALUMINIUM CONDUCTOR, PVC INSULATED, ARMoured / UNARMoured  
CABLES CONFORMING TO IS:1554 (PART-I)/1988**

Nominal Area of Conductor	UNARMoured CABLES					ARMoured CABLES							
	Ayy					Single Layer-wire (AYWY)				Single Layer – Strip (AYFY)			
	Nominal Thickness of Insulation	Nominal Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable	Nominal Diameter of armour wire	Minimum Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable	Nominal Thickness of Armour Strip	Minimum Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable
Sq.mm	mm	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km
6	1.0	0.3	1.8	18	360	1.4	1.24	19	700	-	-	-	-
10	1.0	0.3	1.8	19	460	1.4	1.40	21	900	-	-	-	-
16	1.0	0.3	1.8	19	440	1.6	1.40	21	950	0.8	1.40	20	700
25	1.2	0.3	2.0	22	620	1.6	1.40	23	1100	0.8	1.40	23	900
35	1.2	0.3	2.0	24	740	1.6	1.40	26	1300	0.8	1.40	24	1000
50	1.4	0.3	2.0	27	940	1.6	1.56	29	1600	0.8	1.56	27	1300
70	1.4	0.4	2.2	30	1200	2.0	1.56	33	2150	0.8	1.56	31	1600
95	1.6	0.4	2.2	34	1600	2.0	1.72	37	2650	0.8	1.56	35	2000
120	1.6	0.4	2.2	37	1900	2.0	1.72	39	3000	0.8	1.72	37	2401
150	1.8	0.5	2.4	40	2300	2.0	1.88	43	3550	0.8	1.88	41	2800
185	2.0	0.5	2.6	44	2750	2.5	2.04	49	4600	0.8	1.88	46	3400
240	2.2	0.6	2.8	50	3500	2.5	2.20	54	5600	0.8	2.20	51	4200
300	2.4	0.6	3.0	55	4300	2.5	2.36	59	6600	0.8	2.36	56	5050
400	2.6	0.7	3.4	62	5450	3.15	2.68	68	8700	0.8	2.52	63	6300
500	3.0	0.7	3.6	67	6900	3.15	3.0	75	11000	0.8	2.84	70	7800
630	3.4	0.7	4.0	70	8700	4.0	3.0	84	14000	0.8	3.0	78	9700

**1.1 KV 3 ½ CORE ALUMINIUM CONDUCTOR, PVC INSULATED, ARMoured / UNARMoured CABLES CONFORMING TO IS:1554 (PART-I)/1988**

Nominal Area of Conductor	UNARMoured CABLES					ARMoured CABLES							
	Ayy					Single Layer-wire (AYWY)				Single Layer – Strip (AYFY)			
	Nominal Thickness of Insulation M/N	Nominal Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable	Nominal Diameter of armour wire	Minimum Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable	Nominal Thickness of Armour Strip	Minimum Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable
Sq.mm	mm	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km
25	1.2/1.0	0.3	2.0	24	700	1.6	1.40	24	1300	0.8	1.40	24	1000
35	1.2/1.0	0.3	2.0	26	850	1.6	1.40	26	1450	0.8	1.40	26	1200
50	1.4/1.2	0.3	2.0	29	1050	1.6	1.56	31	1800	0.8	1.56	30	1500
70	1.4/1.2	0.4	2.2	32	1400	2.0	1.56	36	2400	0.8	1.56	34	1800
95	1.6/1.4	0.4	2.2	36	1800	2.0	1.72	39	3000	0.8	1.56	37	2300
120	1.6/1.4	0.5	2.4	40	2200	2.0	1.88	43	3500	0.8	1.72	41	2800
150	1.8/1.4	0.5	2.4	44	2600	2.0	1.88	47	4000	0.8	1.88	45	3200
185	2.0/1.6	0.5	2.6	48	3200	2.5	2.04	53	5200	0.8	2.04	49	3900
240	2.2/1.6	0.6	3.0	54	4100	2.5	2.36	58	6400	0.8	2.2	55	4800
300	2.4/1.8	0.6	3.2	62	5500	3.15	2.52	66	8200	0.8	2.36	61	5800
400	2.6/2.0	0.7	3.4	68	6300	3.15	2.68	75	9910	0.8	2.68	69	7300
500	3.0/2.2	0.7	3.8	77	8000	4.0	3.0	84	13500	0.8	2.84	77	9000
630	3.4/2.4	0.7	4.0	87	10000	4.0	3.0	92	16000	0.8	3.0	87	11500


**1.1 KV FOUR CORE ALUMINIUM CONDUCTOR, PVC INSULATED, ARMoured / UNARMoured CABLES CONFORMING TO IS:1554 (PART-I)/1988**

Nominal Area of Conductor	UNARMoured CABLES					ARMoured CABLES							
	AYY					Single Layer-wire (AYWY)				Single Layer – Strip (AYFY)			
	Nominal Thickness of Insulation	Nominal Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable	Nominal Diameter of armour wire	Minimum Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable	Nominal Thickness of Armour Strip	Minimum Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable
Sq.mm	mm	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km
6	1.0	0.3	1.8	18	390	1.4	1.24	21	800	-	-	-	-
10	1.0	0.3	1.8	20	540	1.6	1.40	22	900	0.8	1.40	21	-
16	1.0	0.3	2.0	20	560	1.6	1.40	23	1120	0.8	1.40	22	700
25	1.2	0.3	2.0	25	750	1.6	1.40	27	1400	0.8	1.40	25	950
35	1.2	0.3	2.0	27	940	1.6	1.56	30	1600	0.8	1.40	28	1150
50	1.4	0.4	2.2	31	1250	2.0	1.56	34	2200	0.8	1.56	32	1400
70	1.4	0.4	2.2	34	1550	2.0	1.56	37	2650	0.8	1.56	35	1800
95	1.6	0.4	2.4	39	2050	2.0	1.72	42	3300	0.8	1.72	41	2200
120	1.6	0.5	2.4	43	2400	2.0	1.88	47	3850	0.8	1.88	43	2700
150	1.8	0.5	2.6	47	2950	2.5	2.04	51	4850	0.8	1.88	48	3200
185	2.0	0.6	2.8	52	3650	2.5	2.20	56	5800	0.8	2.04	53	3900
240	2.2	0.6	3.0	57	4600	2.5	2.36	62	7000	0.8	2.36	59	4850
300	2.4	0.7	3.4	60	5000	3.15	2.68	72	9200	0.8	2.52	67	5850
400	2.6	0.7	3.6	68	6250	3.15	2.84	79	11000	0.8	2.84	74	7300
500	3.0	0.7	4.0	77	8000	4.0	3.0	90	15000	0.8	3.0	83	9000
630	4.0	0.7	4.0	87	10000	4.0	3.0	99	18000	0.8	3.0	93	11000



**1.1 KV 1.5 SQMM COPPER CONDUCTOR, PVC INSULATED ARMoured/ UNARMoured  
CONTROL CABLES CONFORMING TO IS:1554 (PART-I)/1988**

No. of Cores	UNARMoured CABLES					ARMoured CABLES							
	YY					Single Layer-wire (YWy)				Single Layer – Strip (YFY)			
	Nominal Thickness of Insulation	Nominal Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable	Nominal Diameter of armour wire	Minimum Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable	Nominal Thickness of Armour Strip	Minimum Thickness of Outer Sheath	Apporx. Overall Diameter of cable	Appox. Weight of cable
mm	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km	
2	0.8	0.3	1.8	13	210	1.4	1.24	15	480	-	-	-	-
3	0.8	0.3	1.8	13	230	1.4	1.24	16	520	-	-	-	-
4	0.8	0.3	1.8	14	270	1.4	1.24	17	590	-	-	-	-
5	0.8	0.3	1.8	15	320	1.4	1.24	18	660	-	-	-	-
6	0.8	0.3	1.8	16	340	1.4	1.24	19	700	-	-	-	-
7	0.8	0.3	1.8	16	360	1.4	1.24	19	720	-	-	-	-
8	0.8	0.3	1.8	17	410	1.4	1.24	20	800	-	-	-	-
9	0.8	0.3	1.8	18	460	1.4	1.24	21	900	-	-	-	-
10	0.8	0.3	1.8	20	480	1.4	1.4	22	950	-	-	-	-
12	0.8	0.3	1.8	20	550	1.6	1.4	23	1110	0.8	1.24	21	870
14	0.8	0.3	1.8	21	600	1.6	1.4	24	1180	0.8	1.4	22	920
16	0.8	0.3	1.8	22	700	1.6	1.4	26	1290	0.8	1.4	24	1030
19	0.8	0.3	2.0	24	770	1.6	1.4	27	1390	0.8	1.4	25	1120
24	0.8	0.3	2.0	27	960	1.6	1.4	30	1680	0.8	1.4	28	1360
27	0.8	0.3	2.0	28	1040	1.6	1.4	31	1780	0.8	1.4	29	1440
30	0.8	0.3	2.0	29	1130	1.6	1.4	32	1900	0.8	1.4	30	1550
37	0.8	0.3	2.0	32	1320	1.6	1.4	34	2170	0.8	1.4	32	1790
44	0.8	0.3	2.0	35	1650	1.6	1.56	39	2890	0.8	1.56	36	2140
61	0.8	0.4	2.2	39	2110	2.0	1.56	41	3400	0.8	1.56	40	2670

**1.1 KV 2.5 SQMM COPPER CONDUCTOR, PVC INSULATED ARMoured/ UNARMoured  
CONTROL CABLES CONFORMING TO IS:1554 (PART-I)/1988**

No. of Cores	UNARMoured CABLES					ARMoured CABLES							
	YY					Single Layer-wire (YWy)				Single Layer – Strip (YFY)			
	Nominal Thickness of Insulation	Nominal Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable	Nominal Diameter of armour wire	Minimum Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable	Nominal Thickness of Armour Strip	Minimum Thickness of Outer Sheath	Apprx. Overall Diameter of cable	Apprx. Weight of cable
mm	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km	mm	mm	mm	Kg/km	
2	0.9	0.3	1.8	14	260	1.4	1.24	16	560	-	-	-	-
3	0.9	0.3	1.8	15	300	1.4	1.24	17	620	-	-	-	-
4	0.9	0.3	1.8	16	350	1.4	1.24	18	700	-	-	-	-
5	0.9	0.3	1.8	17	400	1.4	1.24	19	780	-	-	-	-
6	0.9	0.3	1.8	18	450	1.4	1.24	20	860	-	-	-	-
7	0.9	0.3	1.8	18	470	1.4	1.24	20	880	-	-	-	-
8	0.9	0.3	1.8	20	540	1.4	1.40	22	1080	-	-	-	-
9	0.9	0.3	1.8	21	610	1.6	1.40	24	1190	0.8	1.4	23	940
10	0.9	0.3	1.8	23	640	1.6	1.40	25	1270	0.8	1.4	24	980
12	0.9	0.3	2.0	23	760	1.6	1.40	27	1390	0.8	1.4	25	1110
14	0.9	0.3	2.0	24	830	1.6	1.40	28	1490	0.8	1.4	26	1180
16	0.9	0.3	2.0	25	960	1.6	1.40	29	1640	0.8	1.4	27	1330
19	0.9	0.3	2.0	28	1060	1.6	1.40	30	1770	0.8	1.4	29	1450
24	0.9	0.3	2.0	31	1320	1.6	1.56	35	2180	0.8	1.4	33	1780
27	0.9	0.3	2.0	32	1440	1.6	1.56	36	2330	0.8	1.4	33	1930
30	0.9	0.3	2.2	33	1570	1.6	1.56	37	2480	0.8	1.56	35	2070
37	0.9	0.4	2.2	37	1920	2.0	1.56	40	3140	0.8	1.56	38	2440
40	0.9	0.4	2.2	41	2290	2.0	1.56	45	3700	0.8	1.56	42	2870
61	0.9	0.4	2.2	44	2950	2.0	1.72	49	4510	0.8	1.56	46	3630

**NAVIFLEX** CABLES INDUSTRIES

IS:1554



# **NAVIFLEX CABLES INDUSTRIES**

**AN ISO 9001:2008 CERTIFIED CO.**