GALA™

Beyond The Obvious

Heat Shrink Products

CERTIFICATIONS

ISO 9001 : 2008

ISO 14001 : 2004

OHSAS 18001 : 2007

EXPORT HOUSE

MAJOR TEST REPORTS / CERTIFICATIONS

UL

TURKEY

ISSeP

ERDA

KEMA

RKTECH, INC. U.S.A.

RoHS

TER Engineering Services

MAJOR APPROVALS / CLIENTS

eDF

חברת החשמל
Israel Electric

DCRP Oman

KOGAS

Jepco

KNPC

Schneider Electric

ABB

SIEMENS

AREVA

Nexans

PRYSMIAN

Draka

बी एच ई एल
BHEL

Kirloskar

Jyoti Ltd.
Water • Power • Progress

INSULCAP™

HEAT SHRINK CABLE END CAP

Insulcap is used to seal the ends of all types of Cables & protect from ingress of water/moisture. The caps are manufactured from high quality cross linked polyolefin material.

Compatible with most commonly used Cable Jackets i.e. XLPE, PVC, PILC or Rubber Sheathed Cable.

Hot Melt adhesive lining provides permanent seal on irregular cable sheaths.

Excellent resistance to weathering, moisture, contamination and adverse environmental conditions, according to IP 68 (Ingress Protection).

- Tamper Proof Application:
  Custom Logo / Print with special non-removable Ink marks permanent seal on End Cap after Shrinking, thereby avoiding claims in case of Pilferage of Cable length.
- Valved End caps (V) available for pressurized application for Telecom cables.
- Special Relief valved End Caps (RV) available for degassing application in High Voltage Power cables.
- Live End Cap Kit available for sealing Live Cables.
- Conductive End Caps are available with Conductive Mastic.

Technical Qualification Report : QR 1011

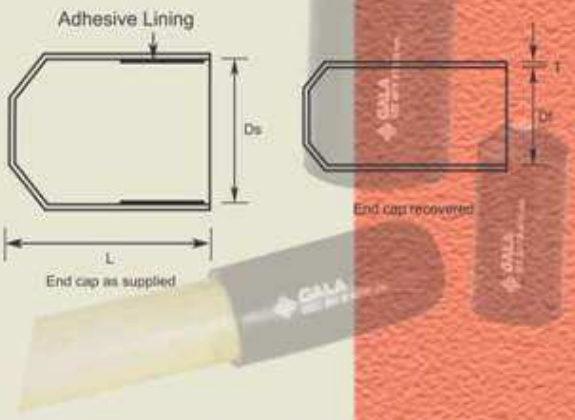
Selection Chart All dimensions are in mm

CODE NO.	Ds (Min.)	Df (Max.)	Ls (Min.)	Tf(±10%)	CABLE RANGE
GEC 001S	6	2	25	2.0	2 - 4
GEC 001SA	8	2	25	2.0	4 - 6
GEC 001	12	4	40	2.3	4 - 8
GEC 001L	12	4	58	2.3	4 - 8
GEC 001 A	14	4	38	2.3	4 -11
GEC 001 AL	14	4	58	2.3	4 -11
GEC 101	20	7.5	55	2.3	8 - 16
GEC 101 L	20	8	75	2.5	8 - 16
GEC 101 A	25	8	55	2.3	8 - 20
GEC 101 AL	25	8	75	2.5	8 - 20
GEC 102	30	11	75	2.5	12 - 26
GEC 102 A	35	11	75	2.5	12 - 30
GEC 102 AL	35	11	105	2.5	12 - 30
GEC 201	40	15	90	3.3	16 - 35
GEC 201 L	40	15	120	3.3	16 - 35
GEC 201 A	45	15	90	3.3	16 - 40
GEC 201 AL	45	15	120	3.3	16 - 40
GEC 301	55	25	125	3.8	25 - 47
GEC 301 L	55	25	170	3.8	25 - 47
GEC 301 A	63	25	125	3.8	25 - 55
GEC 301 AL	63	25	170	3.8	25 - 55
GEC 401	75	35	140	4.0	35 - 68
GEC 401 L	75	35	180	4.0	35 - 68
GEC 401 A	85	36	140	4.0	36 - 78
GEC 401 AL	85	35	180	4.0	36 - 78
GEC 501	100	45	160	4.0	45 - 90
GEC 501 L	100	45	200	4.0	45 - 90
GEC 501 A	120	45	160	4.0	45 - 110
GEC 501 AL	120	45	200	4.0	45 - 110
GEC 601	130	60	155	4.6	64 - 120
GEC 601 L*	130	65	300	4.6	67 - 120
GEC 701	154	60	165	4.6	70 - 145
GEC 701 L*	160	65	300	4.5	70 - 145
GEC 801 S*	190	125	220	4.0	140 - 165
GEC 801*	230	125	220	4.0	140 - 200
GEC 901*	310	120	220	7.0	140 - 280
GEC 1001*	400	204	220	6.0	230 - 360
GEC 1101*	500	200	220	6.0	230 - 460

* New sizes D : Internal Diameter; s : as supplied; T : after free recovery

Technical Specification

PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	12 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	350 % (min)	ASTM D638
Density	1.05± 0.2 gm/cm³	ASTM D792
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.2 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	11 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min.)	ASTM D638
Low Temperature Flexibility	No Cracking	ASTM D2671
(-40°C for 4 hrs.)		
Heat Shock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +100°C	IEC 216
Electrical		
Dielectric Strength	12 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10^{16} Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150



INSULCORE™ LOW VOLTAGE

HEAT SHRINK LOW VOLTAGE CABLE BREAKOUT

Insulcore-Low voltage provides a strong and permanent environmental seal to the crutch of 2, 3, 4, 5, 6 and 7 core PVC, XLPE Rubber and PILC cables upto 1.1 KV rated voltage.

The Breakouts are Manufactured form high quality cross linked polyolefin material that offer an exceptional insulation and long term service reliability.

The Breakouts are internally coated with hot melt adhesive. These breakouts when installed in position provide 100% water/moisture proofness to the system according to IP 68 (Ingress Protection).

Customised dimensions of Breakouts available on request.

Technical Qualification Report : QR 1012

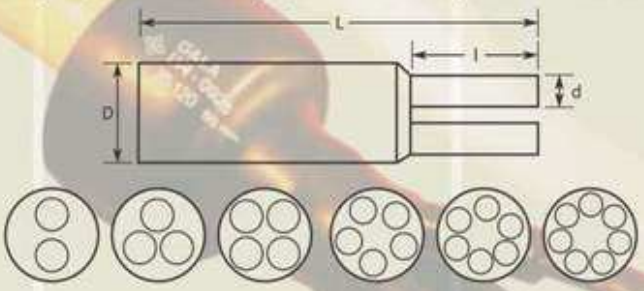
Selection Chart — All dimensions are in mm

CODE NO.	No.of Core	Ds		d		L		l		Tb	Tc
		Ds	Df	ds	df	Ls	Lf	ls	lf	f±10%	f±10%
LV2GBB-0308S	2	22	8	10	3	70	85	14	20	2.2	2.0
LV2GBB-0308	2	32	8	14	3	70	85	15	20	2.2	2.0
LV2GBB-0410	2	32	10	14	4	70	85	15	20	2.2	2.0
LV2GBB-0410A	2	42	11	14	4	65	85	14	20	2.2	2.0
LV2GBB-0720	2	60	20	24	7	95	120	25	34	3.0	2.5
LV2GBB-0720A	2	70	30	30	8	95	120	25	34	3.0	2.5
LV2GBB-156S	2	110	65	45	15	100	140	40	60	2.2	2.0
LV2GBB-1565A	2	156	65	50	15	100	140	40	60	2.2	2.0
LV2GBB-2075*	2	170	75	35	20	145	210	45	90	3.1	2.9
LV2GBB-2075A*	2	235	78	65	22	140	210	45	90	3.1	2.9
LV2GBB-24135	2	235	135	60	24	200	250	70	83	2.8	2.5
LV2GBB-55175	2	250	175	85	55	160	200	55	66	3.5	3.5
LV2GBB-55175A	2	355	180	155	60	150	200	50	66	3.5	3.5
LV3GBB-0309*	3	32	9	12	3	85	100	20	24	2.0	1.7
LV3GBB-0413	3	37	14	15	4	80	100	15	21	2.2	2.0
LV3GBB-0820	3	53	20	25	8	160	188	55	62	3.7	2.8
LV3GBB-0820A*	3	70	20	27	8	155	188	55	62	3.7	2.8
LV3GBB-1330	3	80	30	36	13	185	215	60	75	3.9	3.1
LV3GBB-1330A	3	95	30	39	13	185	215	60	75	3.9	3.1
LV3GBB-2145	3	110	45	55	20	200	235	70	88	4.3	3.0
LV3GBB-2145A	3	125	45	60	21	190	230	65	90	4.6	3.4
LV3GBB-275S	3	140	56	70	28	215	250	80	90	4.6	3.4
LV3GBB-275SA	3	180	58	70	29	200	250	75	90	4.6	3.4
LV3GBB-3060	3	200	60	75	30	155	225	55	85	4.6	3.4
LV4GBB-0312S	4	35	12	10	3	80	100	15	25	2.4	1.7
LV4GBB-0312	4	40	12	14	3	80	100	15	25	2.4	1.7
LV4GBB-0415	4	41	16	14	4	80	100	15	23	2.4	1.7
LV4GBB-0415A	4	50	17	17	4	75	95	15	23	2.4	1.7
LV4GBB-0821	4	58	26	21	7	140	170	32	48	3.5	2.5
LV4GBB-0825N*	4	55	25	25	9	160	195	35	51	3.5	2.3
LV4GBB-0825	4	70	25	25	8	160	185	30	35	3.0	2.5
LV4GBB-0925	4	70	30	25	9	155	190	35	48	3.7	2.6
LV4GBB-1130	4	80	31	31	10	150	190	32	47	3.7	2.6
LV4GBB-1334	4	90	42	35	13	170	210	40	52	3.7	2.6
LV4GBB-1334A	4	100	44	35	13	170	208	40	51	3.7	2.6
LV4GBB-2454	4	125	44	40	14	175	208	40	51	3.7	2.6
LV5GBB-0308*	5	32	8	10	3	95	117	22	28	2.1	1.7
LV5GBB-0415	5	50	16	15	4	85	110	23	33	3.2	2.6
LV5GBB-0415A	5	57	17	15	4	75	110	23	33	3.2	2.6
LV5GBB-0832	5	80	32	26	8	155	190	55	65	3.3	2.8
LV5GBB-0832A	5	100	33	32	8	150	190	50	65	3.3	2.8
LV6GBB-0412*	6	44	12	13	4	55	82	20	30	2.2	2.0
LV6GBB-0737	6	85	37	23	7	100	140	30	46	3.2	2.6
LV7GBB-0737	7	85	37	23	7	100	140	40	55	2.7	2.6

D,d : Internal Diameter; s : as supplied; f : after free recovery; Tb, Tc : Thickness of body & core * New sizes

Technical Specification

PROPERTIES	VALUE	STANDARD
Tensile Strength	12 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	350 % (min)	ASTM D638
Density	1.05± 0.2 gm/cm³	ASTM D792
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.2 % (max.)	ASTM D570
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	11 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min.)	ASTM D638
Low Temp. Flexibility (-40°C for 4 hrs.)	No Cracking	ASTM D2671
Heat Shock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +100°C	IEC 216
Dielectric Strength	12 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10¹⁴ Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150



NON TRACKING

INSULCORE™

HEAT SHRINK NON TRACKING CABLE BREAKOUT

Insulcore - Non Tracking provides permanent environmental seal to the crutch of 3 core PVC & PILC cable rate upto 36KV.

Manufactured from high quality non tracking cross linked polyolefin material that offers exceptional insulation and long term service reliability.

The breakouts are internally coated with water resistant mastic.

Excellent weather / UV resistance

Good resistance to chemical, solvent, corrosion and fungus.

Selection Chart

All dimensions are in mm.

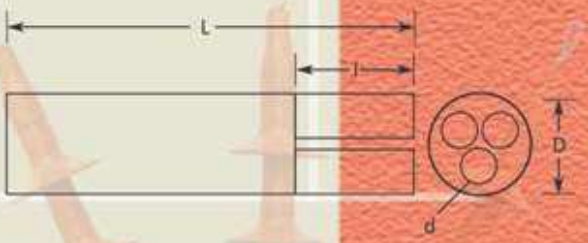
Code	No. Of Cores	D		d		L		l		Tb	Tc
		s	f	s	f	s	f	s	f	f	f
		min	max	min	max	min	max	min	max	+10%	+10%
GAB-0820	3	55	20	25	8	160	188	52	62	3.7	2.8
GAB-0820A*	3	70	20	27	8	155	188	50	62	3.7	2.8
GAB-1330	3	80	30	39	13	185	215	60	75	3.9	3.1
GAB-1330A	3	95	30	39	13	185	215	60	75	3.9	3.1
GAB-2145	3	110	45	55	20	200	230	70	90	4.3	3.0
GAB-2145A	3	125	45	60	21	190	230	65	90	4.3	3.0
GAB-2755	3	140	56	70	28	215	250	80	90	4.6	3.4
GAB-2755A	3	180	56	70	29	230	255	80	90	4.6	3.4
GAB-3060	3	200	60	75	30	155	225	55	85	4.6	3.4

D : Internal Diameter; s : as supplied; f : after free recovery; Tb, Tc : Thickness of body & core

* New sizes

Technical Specification

PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	12 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	350 % (min)	ASTM D638
Density	1.15± 0.2 gm/cm³	ASTM D792
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	11 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min.)	ASTM D638
Low Temperature Flexibility (-40°C for 4 hrs.)	No Cracking	ASTM D2671
Heat Shock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +100°C	IEC 216
Electrical		
Dielectric Strength	15 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10¹⁴ Ohm. cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150
Resistant to track & erosion	No Tracking, erosion or flame failure upto 3.25 KV for 20 min.	ASTM D2303



INSULCORE™ SEMI CONDUCTIVE

HEAT SHRINK SEMI CONDUCTIVE CABLE BREAKOUT

Insulcore - Semi Conductive is used for PILC belted cable to seal the crutch area as well as to provide individual screening to each core.

The breakouts are made from high quality cross linked semi conductive polyolefin material. The breakouts are internally coated with water resistant red mastic.

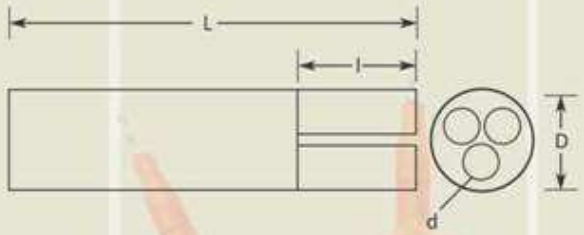
Selection Chart

All dimensions are in mm.

Code	No. Of Cores	D		d		L		l		Tb	Tc
		s	f	s	f	s	f	s	f	f	f
		min	max	min	max	min	max	min	max	±10%	±10%
GCB-0820	3	55	20	25	8	160	188	52	62	3.7	2.8
GCB-1330	3	80	30	36	13	185	215	60	75	3.9	3.1
GCB-1330A	3	95	30	39	13	185	215	60	75	3.9	3.1
GCB-2145	3	110	45	55	20	200	230	70	90	4.3	3.0
GCB-2145A*	3	125	45	60	21	190	230	65	90	4.3	3.0
GCB-2755	3	140	56	70	28	215	250	80	90	4.6	3.4
GCB-2755A	3	180	56	70	29	230	255	80	90	4.6	3.4
GCB-3060*	3	200	60	75	30	155	225	55	85	4.6	3.4

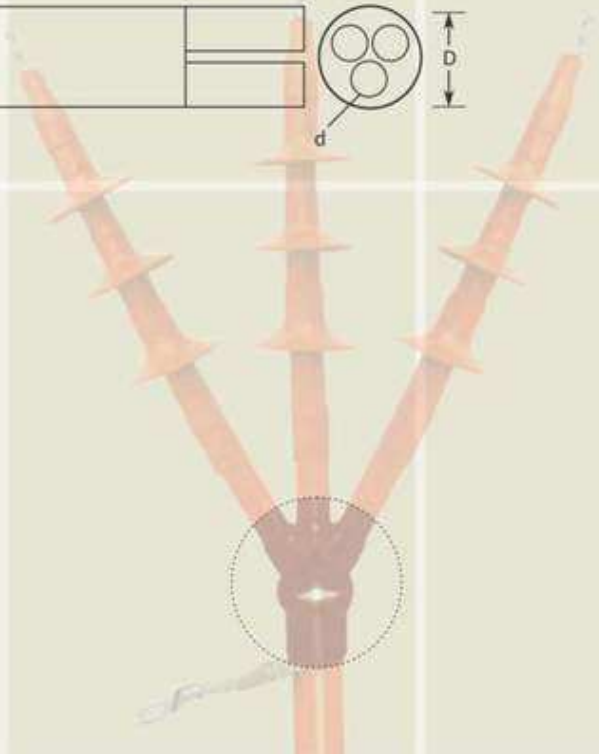
D : Internal Diameter; s : as supplied; f : after free recovery; Tb, Tc : Thickness of body & core

* New sizes



Technical Specification

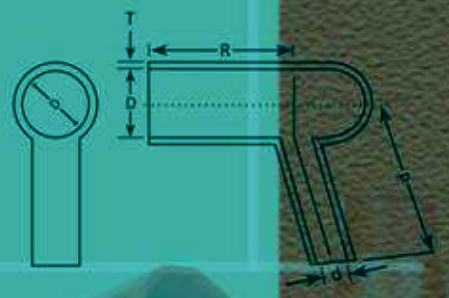
PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	12 N/mm^2 (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min)	ASTM D638
Density	1.10 ± 0.2 gm/cm^3	ASTM D792
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	11 N/mm^2 (Mpa) (min.)	ASTM D638
Ultimate Elongation	250 % (min.)	ASTM D638
Heat Shock (250°C for 30 min)	No Cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +100°C	IEC 216
Electrical		
Volume Resistivity	1 x 10^7 Ohm.cm (max)	ASTM D257



BOOT™

GLE / STRAIGHT BOOT

Technical Specification		
PROPERTIES	**VALUE**	**STANDARD**
Physical		
Strength	12 N/mm² (Mpa) (min.)	ASTM D638
te Elongation	350 % (min)	ASTM D638
/	1.15± 0.2 gm/cm³	ASTM D792
ss	45 ±10 Shore D	ASTM D2240
absorption	0.5 % (max.)	ASTM D570
Thermal		
rated ageing	(120°C for 500 hrs)	ASTM D2671
Strength	11 N/mm² (Mpa) (min.)	ASTM D638
te Elongation	300 % (min.)	ASTM D638
mperature Flexibility for 4 hrs.)	No Cracking	ASTM D2671
hock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Temperature	125°C	IEC 216
uous Temperature Limit	-40 to +100°C	IEC 216
Electrical		
ric Strength	15 KV/mm.(min)	ASTM D149
e Resistivity	1 x 10¹⁴ Ohm.cm (min)	ASTM D257
ric constant	5 (max.)	ASTM D150
nt to track & erosion	No Tracking, erosion or flame failure upto 3.25 KV for 20 min.	ASTM D2303



Technical Qualification Report : QR 1035

Selection Chart (Part - II) All dimensions are in mm

Code	D		d		A	L	B	T
	s	f	s	f	f	f	f	f
	min	max	min	max	min	min	min	±10%
GSB-1	80	34	34	21	140	225	30	3.6
GSB-2	80	34	57	21	140	225	30	3.6
GSB-2A	100	34	57	21	140	225	30	3.6
GSB-3	140	65	90	33	155	325	40	4.2

D,d : Internal Diameter : s : as supplied : f : after free recovery.

ANGLE

HEAT SHRINK RIGHT AN

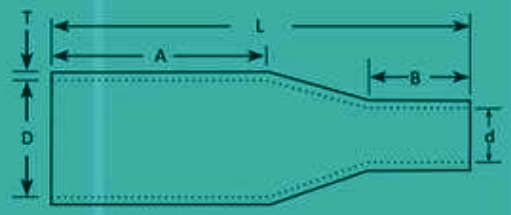
Angleboots are Heat Shrink Right Angle / Straight Boots, which provides insulation to the bushings in the cable termination box, where the clearance between phase to phase and phase to earth is less then the normal air clearance. These boots provide protection against flash-over in the event of high humidity, rodent menace and surge impulse.

The boots are made from high quality cross linked non tracking polyolefin material. They are internally coated with water resistant red mastic.

Tensile
Ultima
Densit
Hardn
Water
Accele
Tensile
Ultima
Low Te (-40°C
Heat S
Shrink
Contin
Dielec
Volum
Dielec
Resista

Selection Chart (Part - I) All dimensions are in mm

Code	D		d		P	R	T
	s	f	s	f	s	f	f
	min	max	min	max	min	max	±10%
GRB-1	78	35	34	16	160	130	4.0
GRB-2	78	37	52	27	170	140	4.5
GRB-2A	90	37	67	27	170	140	4.5
GRB-3	145	72	67	34	170	150	4.5



INSULSHED™

HEAT SHRINK CREEPAGE EXTENSION SKIRT (RAIN SHED)

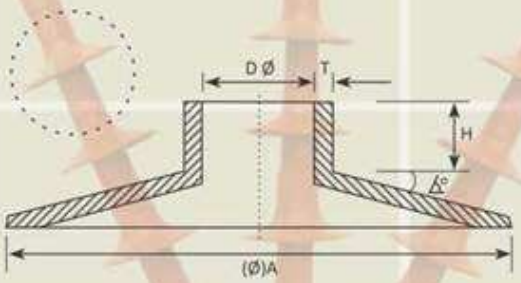
Insulshed is used to increase the surface creepage distance of the cores of cable termination without increasing the tail length. They are also used to avoid continuity during rainy season to avoid short circuiting of the electrical network.

The rainsheds are made from high quality cross linked polyolefin material that offers exceptional non tracking behaviour, insulation and long term service reliability for indoor and outdoor applications. The creepage extension sheds are internally coated with water resistant mastic.

Selection Chart (Part - III) All dimensions are in mm

Code	ØA (min)	Ds (min)	Df (max)	Hs (min)	∆° (min)	Tf (min)
GRS 130-1	91	36	12	17	10	2.6
GRS 130-1N*	90	41	12	33	20	2.7
GRS 130-2	124	51	21	20	10	3.5
GRS 130-2N*	119	55	18	40	20	3.7
GRS 130-3	140	67	31	24	10	3.5
GRS 130-3N*	135	75	28	40	20	3.5
GRS 130-4	140	80	35	24	10	3.5
GRS 130-5	140	105	35	42	10	3.5
GRS 130-6S*	200	120	50	45	10	4.5
GRS 130-6*	200	150	50	45	20	4.5

All dimensions are in mm.
D : Internal Diameter : s : as supplied : f : after free recovery.
* New Sizes



Technical Specification

PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	12 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	350 % (min)	ASTM D638
Density	1.15± 0.2 gm/cm³	ASTM D792
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	11 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min.)	ASTM D638
Low Temperature Flexibility (-40°C for 4 hrs.)	No Cracking	ASTM D2671
Heat Shock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +100°C	IEC 216
Electrical		
Dielectric Strength	15 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10¹⁴ Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150
Resistant to track & erosion	No Tracking, erosion or flame failure upto 3.25 KV for 20 min.	ASTM D2303

COMMERCIAL

INSULTUBE™

HEAT SHRINK MEDIUM & HEAVY WALL TUBING

Insultube is Heat shrink Medium & Heavy wall tubing.

Medium wall tubes (GMW) are used for environmental protection of low voltage cable termination and insulating the connectors for low voltage straight through joints/splice rated upto 1.1KV. Heavy wall tubes (GHW) are used for mechanical protection and outer sealing of underground straight through cable joints / splice upto 36KV.

These tubes are manufactured from high quality cross inked polyolefin material.

Selection Chart

Code	D min (mm)	d max (mm)	T±10% (mm)
GMW 10/3	10	3	1.5
GMW 12/4	12	4	1.8
GMW 19/6	19	6	2.0
GMW 22/6	22	6	2.0
GMW 27/8	27	8	2.5
GMW 30/8	30	8	2.6
GMW 33/10	33	10	2.6
GMW 40/12	40	12	2.7
GMW 50/16	50	16	2.7
GMW 70/22	70	22	2.7
GMW 90/28	90	28	3.0
GMW 105/30	105	30	3.0
GMW 115/34	115	34	3.2
GMW 130/36	130	36	3.2
GMW 140/42	140	42	3.2
GMW 160/50	160	50	3.3
GMW 180/55	180	55	3.3
GMW 200/60	200	60	3.5

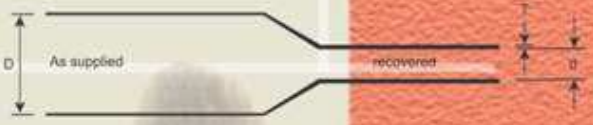
Code	D min (mm)	d max (mm)	T±10% (mm)
GHW 12/3	12	3	2.4
GHW 19/6	19	6	2.5
GHW 22/6	22	6	2.5
GHW 30/8	30	8	3.0
GHW 43/12	43	12	4.0
GHW 51/16	51	16	4.0
GHW 72/22	72	22	4.0
GHW 85/25	85	25	4.0
GHW 105/30	105	30	4.0
GHW 120/36	120	36	4.0
GHW 140/42	140	42	4.2
GHW 160/50	160	50	4.3
GHW 180/55	180	55	4.3
GHW 200/65	200	65	4.3

D,d : Internal Diameter

- Optional hot melt adhesive lining for complete environmental protection and insulation, according to IP 68 (Ingress Protection).
- Excellent resistance to weathering, UV rays, chemical and solvents.
- Maximum cut length available upto 1500 mm.
- Custom dimensions, thickness, length & colours available on request.
- Conforms to IEC 60684-3-247 standard.

Technical Specification

PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	11 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	350 % (min)	ASTM D638
Longitudinal Change	-10% (max.)	ASTM D2671
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	11 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min.)	ASTM D638
Low Temperature Flexibility (-40°C for 4 hrs.)	No Cracking	ASTM D2671
Heat Shock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +110°C	IEC 216
Electrical		
Dielectric Strength	12 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10^{14} Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150



Ordering Information

GMW 10/3 A 1000

- Gala Code
- Size
- With Adhesive
- Length(mm)

Technical Qualification Report : QR 1013

INSULTUBE RED™

HEAT SHRINK RED INSULATION TUBE

Insultube - Red is used in Power Cable Joints for MV Applications.

These tubes are manufactured from high quality cross linked polyolefin material.

Excellent Di-electric properties.

Conforms to IEC 60684-3-247 standard.

Halogen free, RoHS compliant.

Customised dimensions, thickness, length & colours available on request.

Selection Chart

Code	D min. (mm)	d max. (mm)	T±10% (mm)
GRT 34/10	34	10	3.0
GRT 46/13	46	13	3.5
GRT 54/16	54	16	4.0
GRT 60/18	60	18	4.0
GRT 68/20	68	20	4.2
GRT 75/25	75	25	4.5
GRT 85/28	85	28	5.1
GRT 95/30	95	30	5.3

D,d : Internal Diameter

NEW

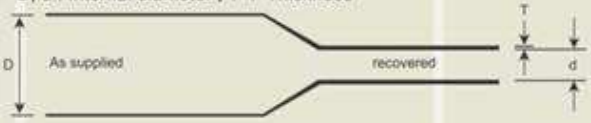
Selection Chart (Heavy Wall)

Code	D min. (mm)	d max. (mm)	T±10% (mm)	Length max. (mtr)
GRT(HW) 25/8	25	8	5	1.5
GRT(HW) 35/12	35	12	5	1.5
GRT(HW) 55/18	55	18	5	1.5
GRT(HW) 65/25	65	25	5	1.5
GRT(HW) 85/30	85	30	5	1.5
GRT(HW) 100/38	100	38	5	1.5
GRT(HW) 120/45	120	45	5	1.5
GRT(HW) 140/50	140	50	5	1.5

Selection Chart (Extra Heavy Wall)

Code	D min. (mm)	d max. (mm)	T±10% (mm)	Length max. (mtr)
GRT(EHW) 35/12	35	12	7	1.5
GRT(EHW) 55/18	55	18	7	1.5
GRT(EHW) 65/25	65	25	7	1.5
GRT(EHW) 85/30	85	30	7	1.5
GRT(EHW) 100/38	100	38	7	1.5
GRT(EHW) 120/45	120	45	7	1.5

D, d : Internal diameter ; T : Thickness



Technical Qualification Report : QR 1036

Technical Specification

PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	12 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	350 % (min)	ASTM D638
Longitudinal Change	-10 % (max.)	ASTM D2671
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.2 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	11 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min.)	ASTM D638
Low Temperature Flexibility (-40°C for 4 hrs.)	No Cracking	ASTM D2671
Heat Shock (250°C for 30 min.)	No cracking or flowing	ASTM D2671
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +110°C	
Electrical		
Dielectric Strength	20 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10^{14} Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150

NON TRACKING
INSULTUBE™

HEAT SHRINK NON TRACKING TUBE

Insultube - Nontracking is used in Medium Voltage Cable Joints and Terminations upto 36 KV. The tubes are produced from high quality non tracking cross linked polyolefin material that offers exceptional insulation and long term service reliability.

General Properties

- Excellent anti-tracking performance and erosion resistance.
- Halogen free, flame retardant.
- Good weather / UV resistance.
- High resistance to chemical, solvent, corrosion and fungus.
- Customised dimension, thickness, length & colour available on request.

Selection Chart

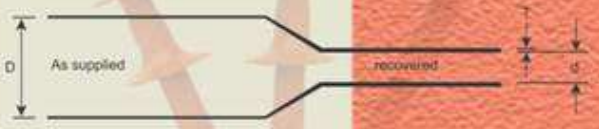
Code	D min. (mm)	d max. (mm)	T±10% (mm)	Spool length (mtr)
GAT 25/8	25	8	2.5	30
GAT 35/12*	35	12	2.7	30
GAT 45/16*	45	16	3.0	30
GAT 55/20*	55	20	3.0	30
GAT 65/25	65	25	3.0	15
GAT 75/28	75	28	3.0	15
GAT 100/38	100	38	3.0	15

Selection Chart (Heavy Wall)

Code	D min. (mm)	d max. (mm)	T±10% (mm)	Length max. (mtr)
GAT(HW) 25/8	25	8	5	1.5
GAT(HW) 35/12	35	12	5	1.5
GAT(HW) 55/18	55	18	5	1.5
GAT(HW) 65/25	65	25	5	1.5
GAT(HW) 85/30	85	30	5	1.5
GAT(HW) 100/38	100	38	5	1.5
GAT(HW) 120/45	120	45	5	1.5
GAT(HW) 140/50	140	50	5	1.5

Technical Specification

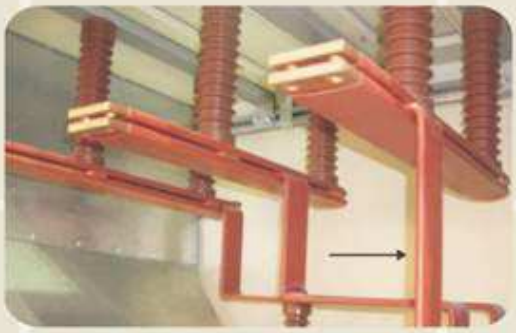
PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	10 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	350 % (min)	ASTM D638
Longitudinal Change	-10 % (max.)	ASTM D2671
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	8 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	250 % (min.)	ASTM D638
Low Temperature Flexibility (-40°C for 4 hrs.)	No Cracking	ASTM D2671
Heat Shock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +100°C	IEC 216
Electrical		
Dielectric Strength	15 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10^{14} Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150
Resistant to track & erosion	No Tracking, erosion or flame failure upto 3.25 KV for 20 min.	ASTM D2303



Technical Qualification Report : QR 1021

BUSTUBE™

HEAT SHRINK BUS BAR TUBE



Bustube (GMB and GHB) are red coloured medium wall and heavy wall unlined Heat Shrink Bus bar tubes, designed to insulate busbar systems upto 36 KV and to protect against accidental flashover. The tubes are manufactured from high quality non tracking crosslinked polyolefin material. Meets ANSI C37.20.2 standards for MV switchgear application up to 36 KV.

- Reduces Busbar clearance.
- High dielectric strength.
- Halogen free, flame retardant.

Technical Specification

PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	10 N/mm^2 (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min)	ASTM D638
Longitudinal Change	-10% (max.)	ASTM D2671
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	8 N/mm^2 (Mpa) (min.)	ASTM D638
Ultimate Elongation	250 % (min.)	ASTM D638
Low Temperature Flexibility (-40°C for 4 hrs.)	No Cracking	ASTM D2671
Heat Shock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +105°C	IEC 216
Electrical		
Dielectric Strength	22 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10^{14} Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150
Resistant to track & erosion	No Tracking, erosion or flame failure upto 3.25 KV for 20 min.	ASTM D2303

Selection Chart (Medium Wall)

Code	D min. (mm)	d max. (mm)	T±10% (mm)	Spool length (mtr)
GMB 16/6	16	6	2.0	30
GMB 25/8	25	8	2.5	30
GMB 30/12	30	12	2.5	30
GMB 40/16	40	16	2.5	30
GMB 50/20	50	20	2.5	30
GMB 65/25	65	25	2.7	30
GMB 75/28	75	28	3.0	15
GMB 100/38	100	38	3.0	15
GMB 120/45	120	45	3.0	12
GMB 150/60	150	60	3.0	1.5
GMB 180/70	180	70	3.0	1.5
GMB 205/85	205	85	3.0	1.5

Clearances With Insulation

Voltage	Medium Wall Tube (GMB)		Heavy Wall Tube (GHB)		UN-INSULATED BUS BARS
	Ph. To Ph.	Ph. To gr.	Ph. To Ph.	Ph. To gr.	
12 KV	65	75	35	45	120
17.5KV	85	105	55	65	160
24 KV	115	150	70	100	220
36 KV	200	285	140	190	320

Selection Chart (Heavy Wall)

Code	D min. (mm)	d max. (mm)	T±10% (mm)	Spool length (mtr)
GHB 25/8	25	8	3.7	20
GHB 30/12	30	12	4.0	20
GHB 40/16	40	16	4.0	20
GHB 50/20	50	20	4.0	20
GHB 75/28	75	28	4.0	15
GHB 100/38	100	38	4.2	15
GHB 120/45	120	45	4.2	12
GHB 150/60	150	60	4.5	1.5
GHB 180/70	180	70	4.5	1.5

Technical Qualification Report : QR 1016

All dimensions are in mm D,d : Internal Diameter; T : Thickness

INSULSLEEVE™

HEAT SHRINK WRAP AROUND SLEEVE

Insulsleeve is a Cross-linked polyolefin 'tube' which is folded around the cable/pipe, zipped up with a stainless steel channel and then heat shrunk.

Shut down of system not required for repair.

Hotmelt adhesive provides complete environmental sealing and insulation according to IP 68 (Ingress Protection).

High resistance to UV rays, chemicals, corrosion, fungus, etc.

Temperature sensitive paint changes colour when heat shrinking process is complete.

Maximum length available upto 1500 mm.

Selection Chart

Code	Diameter (D)		Thickness (± 20%)	Application
	Supplied	Recovered	(recovered)	Cable Range
GWS - 55/8	55	8	2.7	42-8
GWS - 76/18	76	18	2.7	62-22
GWS - 105/28	105	28	2.7	92-30
GWS - 140/35	140	35	2.7	122-38
GWS - 190/46	190	46	2.7	160-50
GWS - 240/50	240	50	2.7	200-55

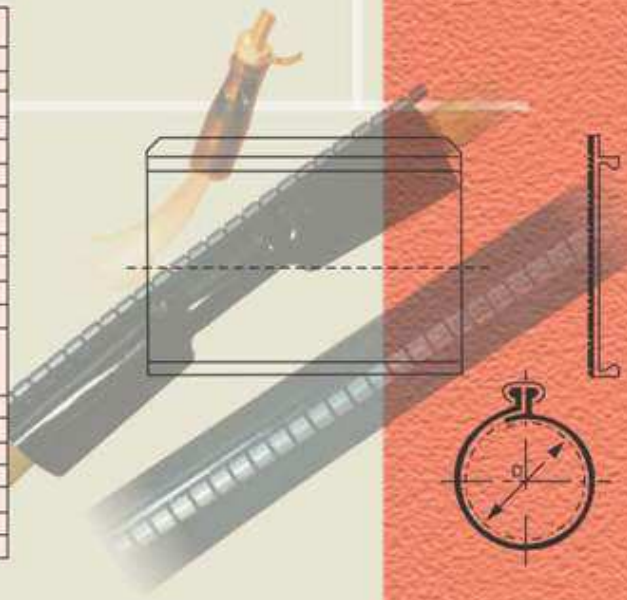
For Cable Repairs

For the protection of Cable jonint

For corrosion protection of Oil, Water & Gas pipeline

Technical Specification

PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	17 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min)	ASTM D638
Longitudinal Change	-10% (max.)	ASTM D2671
Water absorption	0.2 % (max.)	ASTM D570
ESCR 48 hrs. for 50°C	No Crack	ASTM D570
Torchability	No split	TE 201 AOL
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	15 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	220 % (min.)	ASTM D638
Temp. Indicating paint conversion 150°C for 30 min. 250°C for 5 min.	 No Change Colour Change	 Visual Visual
Electrical		
Dielectric Strength	12 KV/mm.(min)	ASTM D149
Chemical		
Chemical Resistance in 0.1 N		
Sol. Of $Na_2 So_4$, Na_2, $NaCl_2$, H_2So_4		
Tensile Strength	15 N/mm² (Mpa) (min.)	ASTM D638
Elongation	200 % (min.)	ASTM D638

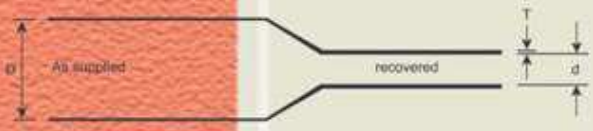


SEMI CONDUCTIVE

INSULTUBE™

HEAT SHRINK SEMI-CONDUCTIVE TUBE

Insultube - Semiconductive is used in High Voltage plastic and paper insulated cable Joints up to 36 kV to provide insulation screen on the build-up insulation over connectors. The semi-conductive Tubings are made from thermally stabilised cross linked semi-conductive polymeric material.



Technical Specification		
PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	12 N/mm²	ASTM D638
Ultimate Elongation	300 %	ASTM D638
Longitudinal Change	-10 % (max.)	ASTM D2671
Hardness	45 ±3 shore	ASTM D2240
Water Absorption	1 % (max)	ASTM D570
Thermal		
Tensile Strength	10 N/mm²	ASTM D638
Ultimate Elongation	300 %	ASTM D638
Electrical		
Volume Resistivity	1 x 10⁷ Ohm.cm (max)	ASTM D257

Selection Chart			
Code	D min. (mm)	d max. (mm)	T±10% (mm)
GCT 30/10	30	10	2.5
GCT 40/12	40	12	2.5
GCT 50/16	50	16	2.5
GCT 75/22	75	22	2.5
GCT 90/26	90	26	2.5
GCT 115/34	115	34	3.0
GCT 140/42	140	42	3.0
GCT 160/50	160	50	3.0
GCT 180/55	180	55	3.0

D,d : Internal Diameter

OIL BARRIER

INSULTUBE

Heat Shrink Oil Barrier Sleeve

Insultube - Oil barrier is applied to PILC Cables for preventing the cable oil from dripping out and increasing the insulation up to 36 kV. These tubes are made from high quality cross linked polyolefin material

Technical Specification		
PROPERTIES	VALUE	STANDARD
Physical		
Tensile Strength	12 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	350 % (min)	ASTM D638
Longitudinal Change	-10 % (max.)	ASTM D2671
Hardness	45 ±10 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Thermal		
Accelerated ageing	(120°C for 500 hrs)	ASTM D2671
Tensile Strength	11 N/mm² (Mpa) (min.)	ASTM D638
Ultimate Elongation	300 % (min.)	ASTM D638
Low Temperature Flexibility (-40°C for 4 hrs.)	No Cracking	ASTM D2671
Heat Shock (250°C for 30 min.)	No cracking or flowing	ESI 09-11
Shrink Temperature	125°C	IEC 216
Continuous Temperature Limit	-40 to +110°C	IEC 216
Electrical		
Dielectric Strength	12 KV/mm.(min)	ASTM D149
Volume Resistivity	1 x 10¹⁴ Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150
Chemical		
Fungus Resistance	less than 1	ASTM G-21
Salt spray test	No pitting / no corrosion	ASTM B-17
Chemical Resistance	Good	
Immersion in following liquids	no visual defects	
NaoH (40%), H2So4 (3%)		
Toluene, Acetone for 24 hrs		
at room temp.		

Selection Chart			
Code	D min. (mm)	d max. (mm)	T±10% (mm)
GOBT 30/10	30	10	2.5
GOBT 40/12	40	12	2.5
GOBT 50/16	50	16	2.5
GOBT 75/22	75	22	2.5
GOBT 90/26	90	26	2.5
GOBT 115/34	115	34	3.0

D,d : Internal Diameter

OTHER PRODUCTS

CABLINK

Termination kit available from 1.1 KV to 36 KV & in Copper or Aluminium Conductor. Used for single core as well as 3 core XLPE/PILC/PVC cables.

CABLINK

Straight thru Joints from 1.1 KV to 36 KV for single core as well as 3 core XLPE/PILC/PVC cables & in Copper & Aluminium Conductor.

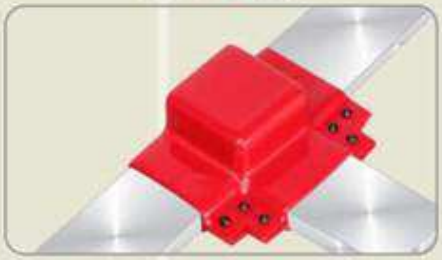
FINOTUBE

Heat Shrink Thin wall Tube - UL Certified, Halogen free flame retardant. Designed to be used in critical areas such as Tunnels & Mines.

FINOTUBE

Yellow-Green range of tubing is a thin wall green and Yellow striped heat shrink polyolefin tubing especially developed for electrical equipment ground lead applications.

BUSBOOT



Busbar insulation Shrouds / Boots are flexible, reusable, electrical insulting covers for busbar and switchgear connections specifically for electrical applications at high voltage.

Mastic Tape

Mastic tape is use for insulation in cable jointing kits to prevent it from corrosion to metal materials. It is excellent thermal insulation property & resistance to water, moisture climate and temperature.

Constant Force Spring

Constant Force Spring are made from Stainless Steel and is use for solder free electric connection between metal cable elements & earthing device.

Splice Protection Sleeve

Designed to offer complete environmental and mechanical integrity of coating or buffer of optical fiber after splicing. Resistant to heat shocks, no cracking dripping or flowing.

Well Contacts Co.

#56, Pushpak Cascade, Swasthi Road, Shanti Nagar,
Bangalore - 560027, India.
Tel: +91-80-22226675, +91-80-41169654.
e-mail: sales@wellcontactsco.com
web: www.wellcontactsco.com