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SINCE 1967

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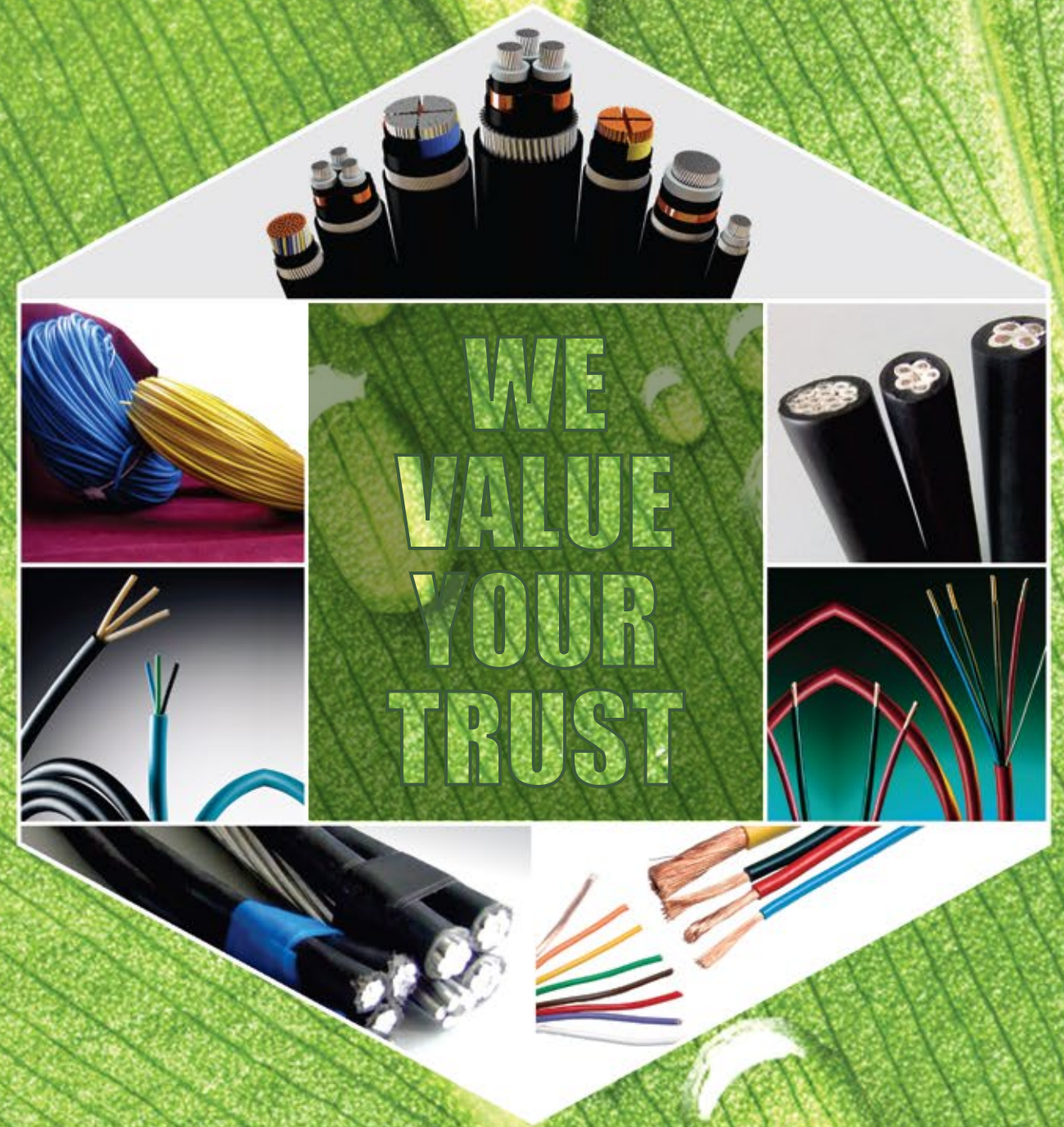
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#23-006/W&C



**KLJ GROUP**  
SINCE 1967



**WE  
VALUE  
YOUR  
TRUST**

*... sustaining life with natural footprints*

**TOTAL SOLUTION FOR WIRE & CABLE INDUSTRY**



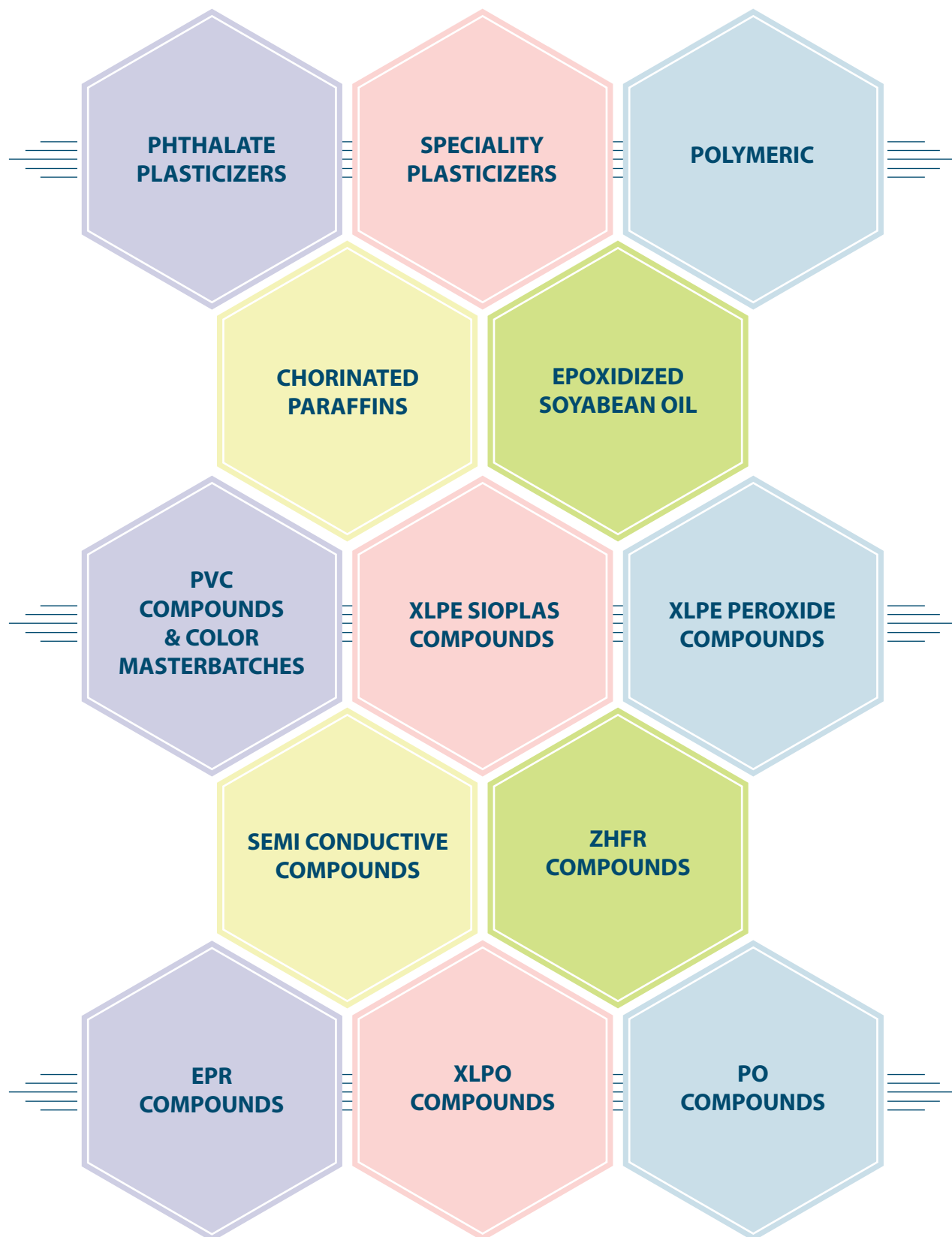
World class plants strategically located in India, Thailand & Qatar having installed capacity of over 650,000 tpa with backward integration for Phthalic Anhydride and Chlorine

One stop Total Solutions provider for all the Plasticizer needs

**COMPLETE RANGE OF PLASTICIZERS**  
 Phthalate | Adipate | Trimellitate | Citrate | Stearate | Benzoate | Sebacate | Maleate | Polymeric | ESBO | Chlorinated Paraffins



### TOTAL SOLUTION FOR WIRE & CABLE INDUSTRY



### PRIMARY PLASTICIZERS

Properties	Unit	Test Method	KANATOL 1212	KANATOL 1210	KANATOL 1001	KANATOL 1010	KANATOL 900	KANATOL 800	KANATOL 1056	KANATOL TM 8-10 (L)	KANATOL 3800	KANATOL HT9	KANATOL 405	KANATOL 85	KANATOL 8080	KANATOL 9A	KANATOL 8A
			Di Do Decyl Phthalate	Di Un Decyl Phthalate	Di Iso Decyl Phthalate	Di Propyl Heptyl Phthalate	Di Iso Nonyl Phthalate	Di 2 Ethyl Hexyl Phthalate	KANATOL Nonyl Phthalate	Tri Octyl Decyl Tri Mellitate (Linear)	Tri Octyl Tri Mellitate	n Butyl Stearate	Di Octyl Sebacate	Bis 2 Ethyl Hexyl Terephthalate	Di Iso Nonyl Adipate	Di Octyl Adipate	
Appearance	NA	Visual	Water white clear liquid														
Colour (Max.)	Hazen	ASTM D 1045-08	40	50	20	20	20	20	20	100	50	40	60	40	20	40	30
Specific Gravity at 27°C	NA	ASTM D 1045-08	0.942±0.003	0.952±0.003	0.963±0.003	0.961±0.003	0.973±0.003	0.983±0.003	0.983±0.003	0.977±0.003	0.989±0.003	0.969±0.003	0.857±0.003	0.913±0.003	0.983±0.003	0.922±0.003	0.923±0.003
Refractive Index at 27°C	NA	ASTM D 1045-08	1.480±0.003	1.482±0.003	1.485±0.003	1.485±0.003	1.486±0.003	1.486±0.003	1.486±0.003	1.487±0.003	1.487±0.003	1.488±0.003	1.447±0.003	1.450±0.003	1.487±0.003	1.452±0.003	1.487±0.003
Volatile Loss at 130°C for 3 Hours (Max.)	% by mass	KLJTM	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.10	0.10	0.10	0.20 (at 110°C for 2 Hrs.)	0.20	0.10	0.10	0.10
Moisture Content (Max.)	% by mass	ASTM E 203-08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Acidity as Acid (Max.)	% by mass	ASTM D 1045-08	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.15 (AV)	1.00 (AV)	0.02	0.01	0.03	0.02
Heat Stability at 180°C for 2 Hours	Hazen	IS 9591:2013	No Change	No Change	No Change	No Change	No Change	No Change	No Change	No Change	65	No Change	No Change (at 150°C for 2 Hrs.)	No Change	No Change	50	40
Acidity After Heat Treatment at 180°C for 2 Hours (Max.)	% by mass	IS 9591:2013	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.05	-	-	0.03	0.03	0.05	0.04
Ester Value	mg KOH/gm	ASTM D 1045-08	223±3	236±3	251±3	251±3	267±3	287±3	287±3	277±3	306±3	271±3	172±5	263±3	287±3	281±3	303±3
Ester Content (Min.)	% by weight	ASTM D 1045-08	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.0	99.0	99.5	99.0	99.5	99.5	99.5	99.5
Plasticizing Ester By GLC (Min.)	% by area	KLJTM	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.0	99.0	99.5	99.0	99.5	99.5	99.5	99.5
Residual Alcohol (Max.)	% by area	KLJTM	0.20	0.20	0.10	0.10	0.10	0.10	0.10	-	0.10	0.10	-	0.10	0.10	0.10	0.10
Viscosity at 20°C	cPs	KLJTM	-	118-124	105-111	117-123	76-82	79-85	71-77	107-113	271-277	-	8-14 (at 25°C)	58-64	60-66	19-25	12-18 (at 25°C)
Boiling Point at Atmospheric Pressure	°C	IS 5298:2005	-	-	400	-	-	386	-	-	-	-	343°C	-	400	-	335
Boiling Point at Reduced Pressure	°C	IS 5298:2005	-	-	-	251-254 at 7 mmHg	250 at 7 mmHg	231 at 7 mmHg	-	-	283 at 13.2 mmHg	-	-	248 at 5 mmHg	-	233 at 5 mmHg	-
REACH Compliance	Y/N	-	YES	YES	YES	YES	YES	NO	NO	YES	N.A.	YES	YES	YES	YES	YES	YES

### SECONDARY PLASTICIZERS

KANACHLOR CHLORINATED PARAFFIN											EPOXIDIZED SOYBEAN OIL					
Grades	Unit	Test Method	42 WH	42 WAX	45 D/AD/ AI/AD1	47 WH 1	50 WH	52 D/AD/ AI/AD1	52 KD 5	62 D/AD/ AI/AD1	62 KD 5	Trade Name	Unit	Test Method	KANAMOLL 650 ESBO	KANAMOLL 620 ESBO
Properties												Properties				
Colour (Max.)	Hazen	ASTM D 1045-86	200	300	60	250	300	60	100	100	100	Appearance	NA	Visual	Pale Yellow Clear Liquid	
Specific Gravity at 27°C	N/A	ASTM D 1045	1.180±0.020	1.200±0.020	1.200±0.020	1.210±0.030	1.280±0.020	1.280±0.020	1.280±0.020	1.400±0.030	1.400±0.030	Colour (Max.)	Hazen	ASTM D 1045-08	150	150
Refractive Index at 27°C	N/A	ASTM D 1807	1.503±0.002	1.506±0.002	1.498±0.002	1.503±0.003	1.520±0.003	1.509±0.002	1.510±0.002	1.526±0.003	1.525±0.003	Specific Gravity at 27°C	N/A	ASTM D 1045-08	0.996±0.006	0.990±0.006
Volatile Loss at 180°C for 4 Hours (Max.)	% by weight	KLJ/QCD/WIN/26	2.00	0.80	3.00	1.40	0.80	1.50	4.00	0.90	3.00	Moisture Content (Max.)	% by mass	ASTM E 203-08	0.10	0.10
Chlorine Content	% by weight	ISI 1448-77	42±2.0	42±2.0	45±2.0	47±2.0	50±2.0	52±2.0	52±2.0	62±2.0	62±2.0	Acidity as Acid (Max.)	% by mass	ASTM D 1045-08	1.0±0.2	1.0±0.3
Free Mineral Acidity (Max.)	% by weight	KLJ/QCD/WIN/24	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Oxirane Value	%	KLJ TM	6.5±0.1	6.2±0.1
Free Chlorine (Max.)	% by weight	ISI 9189-79	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	Iodine Value (Max.)	g I2/100 g	KLJ TM	3	5
Viscosity at 27°C	Poise	Brookfield Viscometer ASTM D 445	15-40	50-100	2-5	15-25	300-800	12-35	10-25	300-1200	200-600	REACH Compliance	%	KLJ TM	YES	YES
Heat Stability at 180°C for 20 Minutes (Max.)	Colour	KLJ/QCD/WIN/28	Brown	Brown	Yellow	Light Brown	Brown	Yellow	Brown	Dark Yellow	Brown					
Thermal Stability at 175°C for 4 Hours (Max.)	% by weight	KLJ/QCD/WIN/27	0.40	0.20	0.10	0.20	0.40	0.10	0.20	0.10	0.20					
pH Value (Min.)	-	KLJ/QCD/WIN/29	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					

Note: Specific grades of CPW can be made on request.  
 The above list contains only a few representative grades out of a comprehensive list of regular grades available.  
 RoHS All the above products are complying to RoHS requirements.  
 The above properties are indicative and represent the values as tested in our laboratories. There is no guarantee/warranty whatsoever.  
 Suitability of the product for particular application may be verified before use.





Pioneer in Polymer Compounding with an installed capacity of over 200,000 tps & expanding

High capacity Automated Plants to ensure consistent quality at strategic locations i.e. Silvassa, Agra & Kutch (upcoming)

PRODUCTS RANGE OF COMPOUNDS

PVC | Sioplas | Peroxide | Semi Conductive | EPR | ZHFR | PO | 3LP | PP | EP | TPR | TPE | EVA | Colour/Performance Masterbatch



KLJ XL (SIOPLAS XLPE COMPOUNDS)

KLJ XL (SIOPLAS XLPE COMPOUNDS)

KLJ-XL range is based on Silane grafted Polyethylene, to be used with catalyst Masterbatch. These grades are designed for ambient as well as moisture/forced curing.

Application :- These grades are designed for insulation of Low Voltage (up to 6 KV) and also for Medium Voltage (up to 33 KV) Power Cable.

S.N.	Properties	Tensile Strength	Elongation at Break	After Ageing 135°C for 7 Days		After Ageing 150°C for 10 Days		Hot Set at 200°C for 15 Minutes at 20 N/cm <sup>2</sup> for 1 Hours		Shrinkage at 130°C at 85 °C for 14 Days	Water Absorption at 27°C	Volume Resistivity	Moisture Content -40°C	Cold Bend Test at -40°C	Cold Impact Test at -40°C	Cold Elongation (50Hz) at 23°C	Dielectric Constant at 23°C	Dissipation Factor (50Hz) at 23°C	Dielectric Strength (50Hz)	Carbon Content Index	Limiting Oxygen	Flammability Test	Conform to Standard	Applications
				Tensile Strength	Elongation at Break	Tensile Strength	Elongation at Break	Elongation under Load	Permanent Deformation															
Unit	MPa	%	MPa	%	MPa	%	%	%	%	mg/cm <sup>2</sup>	ohm-cm	ppm				%								
Test Method	IS 10810 (Part 7)/ IEC 60502	IS 10810 (Part 7)/ IEC 60502	IS 10810 (Part 11)/ IEC 60502	IS 10810 (Part 11)/ IEC 60502	IS 10810 (Part 30)/ IEC 60502	IS 7098	IEC 60811-1-3	IS 3396	ASTM E 203	IS 10810	IS 10810	IS 10810	ASTM D 150 (Part 20)	ASTM D 150 (Part 21)	ASTM D 149 (Part 11)	ASTM D 1603	ASTM D 2863	UL 94						
Grade																								
1	KLJ XL 01 AC	≥16	≥450	±25	±25	N/A	N/A	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	N/A	N/A	IS 10810, BS 5467, BS 5468, BS 6724, BS 7655, IEC 60502	Low Voltage Power Cables (LT application) Ambient Curing
2	KLJ XL 01 HS	≥16	≥450	±25	±25	N/A	N/A	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	N/A	N/A	IS 7098 Part 1, IS 10810, BS 5467, BS 5468, BS 6724, BS 7655, IEC 60502, DIN VDE -0250 Part-214 Type-2X11	High speed, Low Voltage Power Cables (LT Application)
3	KLJ XL 01 HS 2	≥16	≥450	±25	±25	N/A	N/A	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	N/A	N/A	IS 7098 Part 1, IS 10810, BS 5467, BS 5468, BS 6724, BS 7655, IEC 60502, DIN VDE -0250 Part-214 Type-2X11	High Speed, Low Voltage Power Cables (LT Application), Ambient Curing
4	KLJ XL 01 PR	≥16	≥450	±25	±25	N/A	N/A	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	N/A	N/A	IS 7098 Part 1, IS 10810, BS 5467, BS 5468, BS 6724, BS 7655, IEC 60502, DIN VDE -0250 Part-214 Type-2X11	High speed, Low Voltage Power Cables (LT Application)
5	KLJ XL 01 HS ABC	≥14.5	≥450	±25	±25	N/A	N/A	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	2.5±0.5	N/A	N/A	IS 10810, BS 5467, BS 5468, BS 6724, BS 7655, IEC 60502	Low Voltage Aerial Bunched Cable
6	KLJ XL 01 HS2 FR	≥14	≥300	±25	±25	N/A	N/A	≤100	<5	≤4	≤1	≥1x10 <sup>15</sup>	≤100	No crack	No crack	≥300	≤2.3	≤0.004	25	N/A	≥24	V0	Fire Survival Test conducted on a resulting insulated cable as per IEC 332 Part 3 Category B	Low Voltage Power Cables with FR (LT Applications)
7	KLJ XL 01 AC H	≥16	≥450	±25	±25	±30	±30	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	N/A	N/A	IS 10810, BS 5467, 5468, 6724, 7655, IEC 60502	1250 rated Silane Grafted XLPE Compound for Low Voltage Power Cables (Ageing 150°C for Days) for Solar Cables
8	KLJ XL 11	≥ 16	≥450	±25	±25	N/A	N/A	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	N/A	N/A	IS 7098 Part 2/ IS 10810 BS 5467, 5468, 6724, 7655 IEC 60502-2	Medium Voltage Power Cables (HT) Applications up to 11 KV
9	KLJ XL 33	≥16	≥450	±25	±25	N/A	N/A	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	N/A	N/A	IS 7098 Part 2/ IS 10810 BS 5467, 5468, 6724, 7655 IEC 60502-2	Medium Voltage Power Cables (HT) Applications up to 33 KV
10	KLJ XL 33 WTR	≥16	≥450	±25	±25	N/A	N/A	≤100	±10	≤4	≤1	≥1x10 <sup>14</sup>	≤100	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	N/A	N/A	IS 7098 Part 2/ IS 10810 BS 5467, 5468, 6724, 7655 IEC 60502-2	KLJ XL 33 WTR is a Water Tree Retardant, Crosslinkable Compound designed for HT Applications

KLJ PX ( PEROXIDE BASED XLPE COMPOUNDS)

KLJ PX ( PEROXIDE BASED XLPE COMPOUNDS)

Description :- KLJ PX 11 & 33 are based on Low Density Poly Ethylene for continuous vulcanization process to produce power cable up to 11/33 KV, to meet the following specification, when processed using sound extrusion and testing processes.

Properties	Density	Tensile Strength	Elongation at Break	After Ageing 135°C for 7 Days		Hot set at 200°C for 15 Minutes at 20 N/cm <sup>2</sup>		Shrinkage at 130°C for 1 Hours	Water Absorption 1 Hours	Volume Resistivity at 85 °C for 14 Days	Moisture Content at 27°C	Cold Bend Test at -40°C	Cold Impact Test at -40°C	Cold Elongation at -40°C Test	Dielectric Constant (50Hz) at 23°C	Dissipation Factor (50Hz) at 23°C	Dielectric Strength (50Hz) at 23°C	Impurity (Diameter)			Conform to Standard	Applications	
				Tensile Strength	Elongation at Break	Elongation under Load (Max.)	Permanent Deformation (Max.)											101 - 200	201 - 500	501 - 1000			
Unit	gm/cm <sup>3</sup>	MPa	%	MPa	%	%	%	%	mg/cm <sup>2</sup>	ohm-cm (min)	ppm								mm	mm	mm		
Test Method	ASTM D 792	IS 10810 (Part 7)/ IEC 60502	IS 10810 (Part 11)/ IEC 60502	IS 10810 (Part 11)/IEC 60502	IS 10810 (Part 30)/IEC 60502	IS 7098	IS 7098	IS 3396	ASTM E 203	IS 10810 (Part 20)	IS 10810 (Part 21)	IS 10810 (Part 11)	IEC 60250	IEC 60250	IEC 60243	KLJ TM							
Grade																							
1	KLJ PX 11	0.925±0.005	≥18	≥450	<10	<10	≤100	≤5	≤4	≤1	≥1x10 <sup>16</sup>	≤100	No crack	No crack	≥300	≤2.3	≤0.0003	≥30				IEC 60502/60840 HD 620-51	Compound developed specially for Continuous Vulcanization process to produce Medium and High Voltage Power Cables (up to 11 KV)
2	KLJ PX 33	0.925±0.005	≥18	≥450	<10	<10	≤60	≤5	≤4	≤1	≥1x10 <sup>16</sup>	≤100	No crack	No crack	≥300	≤2.3	≤0.0003	≥30	≤5	≤5	0	IEC 60502/60840 HD 620-51	Compound developed specially for Continuous Vulcanization process to produce Medium and High Voltage Power Cables (up to 33 KV)
3	KLJ PX 33 WTR	0.925±0.005	≥18	≥450	<10	<10	≤55	≤3	≤4	≤1	≥1x10 <sup>16</sup>	≤100	No crack	No crack	≥300	≤2.3	≤0.0003	≥30	≤5	≤5	0	IEC 60502/60840 HD 620-51	KLJ WTR PX-33 is a Water Tree Retardant, Crosslinkable, Low Density Polyethylene Compound designed for Medium Voltage Power Cable Insulation

KLJ SC ( SEMI-CONDUCTING COMPOUNDS)

KLJ SC ( SEMI-CONDUCTING COMPOUNDS)

Properties	Melt Flow Index 190°C/10 kg	Density at 27°C	Tensile Strength	Elongation at Break	After Ageing 15 at 121°C for 7 Days	After Ageing 15 at 135°C for 7 Days	Hardness	DC Volume Resistivity		Hot Set at 200°C for 15 Minutes at 20 N/cm <sup>2</sup>		Stripping Force	Conform to Standard	Applications	
								23°C	90°C	Elongation under Load (Max.)	Permanent Deformation (Max.)				
Unit	g/10min	g/cm <sup>3</sup>	(Min.) MPa	(Min.) %	%	%	SH-D	ohm-cm	%	%	N/cm				
Test Method	ASTM D 1238	ASTM D 1505	ASTM D 638	ASTM D 638	ASTM D 638	ASTM D 638	ASTM D 2240	ASTM D 991	IS 10810 (Part 30)/IEC 60502	KLJ TM					
Grade															
1	KLJ SEM 500	8-10	1.11±0.03	≥14	≥200	<20	N/A	54±2	<50	<100	N/A	N/A	N/A	NEMA-WC-7, BS 6622, IEC 60502, IEC 60840	Thermoplastic Bonded Semi-Conductive material specially developed for Conductor and Insulation Shielding for Sioplas base Medium Voltage Power Cables
2	KLJ SEM 800	7-9	1.18±0.03	≥10	≥150	<20	N/A	52±2	<100	<1000	N/A	N/A	<40	NEMA-WC-7, BS 6622, IEC 60502, IEC 60841	Thermoplastic Strippable Semi-Conductive material specially developed for Conductor and Insulation shielding for Sioplas base medium voltage power cables.
3	KLJ SC PX 535	N/A	1.14±0.03	≥13	≥150	N/A	<15	54±2	<100	<1000	≤100	≤10	N/A	IEC 60502, NEMA-WC-7, AEIC CS-5/AEIC-CSS, IS 7098-II	Crosslinkable Bonded Semi-Conductive Compound for CCV
4	KLJ SC PX 535R	N/A	1.14±0.03	≥18	≥200	N/A	<10	52±2	<100	<1000	≤100	≤10	N/A	IEC 60502, NEMA-WC-7, AEIC, CS-5/AEIC-CSS, IS 7098-II	Crosslinkable Bonded Semi-Conductive Compound for CCV
5	KLJ SC PX 835	N/A	1.20±0.03	≥15	≥250	N/A	<10	50±2	<100	>1000	≤100	≤10	<40	IEC 60502, NEMA-WC-7, AEIC, CS-5/AEIC-CSS, IS 7098-II	Crosslinkable Bonded Semi-Conductive Compound for CCV
6	KLJ SC PX 835R	N/A	1.18±0.03	≥15	≥250	N/A	<10	45±2	<100	>1000	≤100	≤10	<40	IEC 60502, NEMA-WC-7, AEIC, CS-5/AEIC-CSS, IS 7098-II	Crosslinkable Bonded Semi-Conductive Compound for CCV



Pioneer in Polymer Compounding with an installed capacity of over 200,000 tps & expanding

High capacity Automated Plants to ensure consistent quality at strategic locations i.e. Silvassa, Agra & Kutch (upcoming)

**PRODUCTS RANGE OF COMPOUNDS**  
 PVC | Sioplas | Peroxide | Semi Conductive | EPR | ZHFR | PO | 3LP | PP | EP | TPR | TPE | EVA | Colour/Performance Masterbatch



### KLJ ZHFR (ZHFR COMPOUNDS)

### KLJ ZHFR (ZHFR COMPOUNDS)

**Thermoplastic Zero Halogen Flame Retardant Compound for Wire & Cable application**

KLJ ZHFR range is Polyolefin based Thermoplastic, RoHS compliant, containing a Flame Retardant System, with self extinguishable properties for general purpose Insulation and Sheathing/Jacketing application. It does not emit halogen acid and produce very low gases and low smoke under fire condition.

Properties	Density	Hardness	Tensile Strength	Elongation at Break	After Ageing in Air at 100°C for 7 days		Oxygen Index	Smoke Density Rating	Pressure Test at 80°C Indentation	Acid Gas Emission Test (% HCL)	Tem. Index	Volume Resistivity	Bending Test at Low Temp. (-15°C)	Impact Test at Low Temp. (-15°C)	pH Value	Conductivity	Fluorine Test	Tear Strength	Hot Set Test at 200°C for 15 Minutes 20N/cm2		Conform to Standard	Applications	
					Tensile Strength	Elongation at Break													Elongation under Load	Permanent Deformation			
Unit	g/cm3	SH-D	MPa	%	%	%	%	%	%	%	°C	ohm-cm	BS EN 60811-504:2012	BS EN 60811-506:2012	IEC 60754-2:2011	IEC 60754-2:2011	BS EN 50525-1:2011 Annex C	BS 6469-99.1	IEC 811-2-1	IEC 811-2-1			
Test Method	ASTM D 792	ASTM D 2240	IEC 811-1-1		IEC 811-1-2		ASTM D 2863	ASTM D 2843	IEC 811-3-1	IEC 60754 (Part 1)	ASTM D 2863	ASTM D 257	BS EN 60811-504:2012	BS EN 60811-506:2012	IEC 60754-2:2011	IEC 60754-2:2011	BS EN 50525-1:2011 Annex C	BS 6469-99.1	IEC 811-2-1	IEC 811-2-1			
Grade																							
KLJ ZHFR 323	1.50±0.02	53±2	≥10	≥200	±25	±25	31±1	≤20	≤50	<0.5	>300	≥1x10 <sup>11</sup>	No crack	No crack	≥4.3	≤10	<0.1	≥5	N/A	N/A	BS 7655 LTS 1,3 & 4, VDE 0207 Part 24 HM2 & HM4, IEC 332-1/IEC 332-2/IEC 332-3, CAT C, VDE 0250 Part 215 HMS	General Purpose Insulation and Sheathing/Jacketing Application	
KLJ ZHFR 343 H4	1.50±0.02	57±2	≥10	≥150	±30	±30	34±1	≤20	≤50	<0.5	>300	≥1x10 <sup>11</sup>	No crack	No crack	≥4.3	≤10	<0.1	≥5	N/A	N/A	BS 7655 LTS 1,3 & 4, VDE 0207 Part 24 HM2 & HM4, IEC 332-1/IEC 332-2/IEC 332-3, CAT C, VDE 0250 Part 215 HMS	General Purpose, High Speed Insulation and Sheathing/Jacketing Application with MediumCrackResistant Grade	
KLJ ZHFR 343 H5	1.48±0.02	52±2	≥10	≥150	±20	±20	34±1	≤20	≤50	<0.5	>300	≥1x10 <sup>11</sup>	No crack	No crack	≥4.3	≤10	<0.1	≥9	N/A	N/A	BS 7655 LTS 1,3 & 4, VDE 0207 Part 24 HM2 & HM4, IEC 332-1/IEC 332-2/IEC 332-3, CAT C, VDE 0250 Part 215 HMS	Very Robust, High Crack Resistant for Insulation and Sheathing/Jacketing Application	
KLJ ZHFR 403	1.50±0.02	58±2	≥10	≥150	±30	±30	38±1	≤20	≤50	<0.5	>300	≥1x10 <sup>11</sup>	No crack	No crack	≥4.3	≤10	<0.1	≥5	N/A	N/A	BS 7655 LTS 1,3 & 4, VDE 0207 Part 24 HM2 & HM4, IEC 332-1/IEC 332-2/IEC 332-3, CAT C, VDE 0250 Part 215 HMS	Highly Flame Retardant, High Speed for Insulation and Sheathing/Jacketing Application. (CAT5/CAT6/Housewire/Control Cable/OFC)	
KLJ ZHFR 403 H5	1.46±0.02	50±2	≥13	≥180	<15	<20	38±1	≤20	<35	<0.3	>320	≥5x10 <sup>14</sup>	No crack	No crack	≥5.0	≤2.5	<0.1	≥10	N/A	N/A	BS 7655 LTS 1,3 & 4, VDE 0207 Part 24 HM2 & HM4, IEC 332-1/IEC 332-2/IEC 332-3, CAT C, VDE 0250 Part 215 HMS	Very Robust, High Crack Resistant for Insulation and Sheathing/Jacketing Application	
KLJ ZHFR 403 F UV	1.46±0.02	50±2	≥13	≥180	<15	<20	38±1	≤20	<35	<0.3	>320	≥5x10 <sup>14</sup>	No crack	No crack	≥5.0	≤2.5	<0.1	≥10	N/A	N/A	BS 7655 LTS 1,3 & 4, VDE 0207 Part 24 HM2 & HM4, IEC 332-1/IEC 332-2/IEC 332-3, CAT C, VDE 0250 Part 215 HMS	Very Robust, High Crack Resistant for Insulation and Sheathing/Jacketing Application with UV Stabilise	
KLJ ZHFR 411 UV	1.51±0.02	56±2	≥10	≥150	±25	±25	41±1	≤20	≤40	<0.5	>330	≥1x10 <sup>11</sup>	No crack	No crack	≥4.3	≤8	<0.1	≥7	N/A	N/A	BS 7655 LTS 1,3 & 4, VDE 0207 Part 24 HM2 & HM4, IEC 332-1/IEC 332-2/IEC 332-3, CAT C, VDE 0250 Part 215 HMS	High Flame Retardant, Used for the Production of Energy, Signal and Control Cables	
KLJ ZHFR 500	1.78±0.02	75±3	≥5	≥70	-	-	50±1	-	-	-	>300	≥1x10 <sup>11</sup>	-	-	≥4.3	≤10	<0.1	-	N/A	N/A	VDE 0270 Part 22 & 24, Type HM2	Filling/Bedding Compound	
KLJ ZHFR 311 CL	1.50±0.03	48±2	≥13	≥150	±25	±25	33±1	≤20	≤50	<0.5	≥300	≥5x10 <sup>14</sup>	No crack	No crack	≥4.3	<2.5	<0.1	≥5	≤70	±5	BS EN 50363-0, BS EN 50618 Type M1 & T17, VDE 0270 Part 24 Type HM2 & HM4, IEC 60502 ST8, IEC 332-1/2/3, BS 7655 LTS 1, LTS2, LTS3 & LTS4	General Purpose XL-HFFR for Insulation and Sheathing/Jacketing Application	
KLJ ZHFR 322 CL	1.12±0.02	40±2	≥15	≥350	±30	±30	≥30	≤20	≤50	<0.5	≥300	≥1x10 <sup>11</sup>	No crack	No crack	≥4.3	<2.5	<0.1	≥5	≤50	≤5	BS 7655 LTS 1,3 & 4, VDE 0207 Part 24 HM2 & HM4, IEC 332-1/IEC 332-2/IEC 332-3, CAT C, VDE 0250 Part 215 HMS	General Purpose Soft XL-HFFR for Insulation and Sheathing/Jacketing Application	
KLJ XL ZHFR 333	1.42±0.03	46±2	≥13	≥220	±30	±30	≥33	≤1.5	≤50	<0.5	≥300	≥1x10 <sup>11</sup>	No crack	No crack	≥4.3	≤2.5	<0.1	≥5	≤50	≤5	VDE 0266 Type HX1 & HX11, EN 50363-0 Type G9-G10 & M2, VDE 0207, Part 23 Type HU1, EN 50363-5 Type E1S, CEI 20-91 Type G21-M21, EN 50618-TUV2pgf1169-082007	For Solar Cable	

### KLJ PO (PE COMPOUNDS)

### KLJ PO (PE COMPOUNDS)

**Description** :- KLJ PE based Compounds are designed for Cable Jacketing I Specification :- KLJ PE Compound meets the following specification

Properties	Melt Flow Index 190°C/ 2.16 kg Load	Density	Hardness Strength	Tensile at Break	Elongation at 27°C	Volume Resistivity at 80°C ± 3 for 5 Hours	Shrinkage Constant (50Hz) at 23°C	Dielectric Factor (50Hz) at 23°C	Dissipation Strength (50Hz) at 23°C	Dielectric Induction Time	Oxidation	ESCR	CBC	Conform to Standard	Applications
Unit	g/10min	g/cm3SH-D	MPa	%	ohm-cm	%			KV/mm	Minutes	Hours	%			
Test Method	ASTM D 1238	ASTM D 792	ASTM D 2240	IS 10810 (Part 7)	IS 3396	IS 7098	IEC 60250	IEC 60250	IEC 60243						
Grade															
KLJ MDPE	≤0.6	0.940±0.03	55±2	≥20	≥600	≥1x10 <sup>16</sup>	≤3.0	≤2.4	≤0.0004	≥25	≥100	≥1000	N/A	ST 7 of IEC 60502/60840	Sheathing/Jacketing Compound
KLJ MDPE BK 9406	≤0.8	0.945±0.03	58±2	≥21	≥800	≥1x10 <sup>16</sup>	≤3.0	≤2.4	≤0.0004	≥25	≥60	≥2000	2.5±0.5	ST 7 of IEC 60502/60840	Sheathing/Jacketing Compound
KLJ HDPE 9407	≤1.0	0.944±0.03	58±2	>25	>600	≥1x10 <sup>16</sup>	≤3.0	≤2.4	≤0.0004	≥25	>100	≥1000	N/A	ST 7 of IEC 60502/60840	Sheathing/Jacketing Compound for Communication and Energy Cables
KLJ HDPE BK 9606 M	≤0.8	0.955±0.03	55±2	≥20	≥600	≥1x10 <sup>16</sup>	≤3.5	≤2.75	≤0.0004	≥25	≥40	≥48	2.5±0.5	ST 7 of IEC 60502/60840	Jacketing/Sheathing Material for Optical Fiber Cables
KLJ HDPE BK 9606 AR AT M	≤0.8	0.955±0.03	55±2	≥20	≥600	≥1x10 <sup>16</sup>	≤3.5	≤2.75	≤0.0004	≥25	≥40	≥48	2.5±0.5	ST 7 of IEC 60502/60840	Jacketing/Sheathing Material for Optical Fiber Cables
KLJ HDPE BK 9505	≤0.7	0.958±0.03	60±2	≥32	≥600	≥1x10 <sup>16</sup>	≤3	≤2.75	≤0.0004	≥25	≥70	≥5000	2.5±0.5	ST 7 of IEC 60502/60840	Sheathing/Jacketing Compound

**Remarks** :- Can be offered black or any other colour as required and also with different MFI and other properties.

### KLJ EPR/XLPO (SIOPLAS CROSS LINKABLE POLYOLIFIN COMPOUNDS)

### KLJ EPR/XLPO (SIOPLAS CROSS LINKABLE POLYOLIFIN COMPOUNDS)

**Description** :- KLJ-EPR/XLPO is range of Silane Crosslinkable Elastomeric Compounds, curable when exposed to moist conditions. The Compound is processed in the same way as a non-curable elastomer having good extrusion properties at high output rates. The graft component is to be mixed with a crosslinking catalyst Masterbatch in the ratio 95:5

Properties	Density	Hardness	Tensile Strength	Elongation at Break	After Ageing 135°C for 7 Days		Hot Set at 250°C for 15 Minutes at 20 N/cm <sup>2</sup>		Water Absorption at 85°C for 14 Days	Volume Resistivity at 27°C	Cold Bend Test at -50°C	Cold Impact Test at -50°C	Cold Elongation Test at -50°C	Dielectric Constant (50Hz) at 23°C	Dissipation Factor (50Hz) at 23°C	Dielectric Strength (50Hz) at 23°C	Flammability Test	Conform to Standard	Applications
					Tensile Strength	Elongation at Break	Elongation under Load (Max.)	Permanent Deformation (Max.)											
Unit	gm/cc	SH-A	MPa	%	Mpa	%	%	%	mg/cm2	ohm-cm									
Test Method	ASTM D 792	ASTM D 2240	IS 10810 (Part 7)/ IEC 60502	IS 10810 (Part 7)/ IEC 60502	IS 10810 (Part 11)/ IEC 60502	IS 10810 (Part 11)/ IEC 60502	IS 10810 (Part 30)/ IEC 60502	IS 10810 (Part 30)/ IEC 60502	IS 7098	IS 3396	IS 10810 (Part 20)	IS 10810 (Part 21)	IS 10810 (Part 11)	IEC 60250	IEC 60250	IEC 60243	UL 94		
Grade																			
KLJ EPR 65	0.89±0.02	64±3	≥10	≥400	±30	±30	≤175	±15	≤5	≥1x10 <sup>11</sup>	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	IEC 60502-2-EPR, IS 6380 IE-2, IS 6380 IE-1	Good Flexibility, Low Toxicity, Low Voltage Insulation
KLJ EPR 75	0.91±0.02	80±3	≥10	≥400	±30	±30	≤175	±15	≤5	≥1x10 <sup>11</sup>	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	IEC 60502-2-EPR, IS 6380 IE-2, IS 6380 IE-1	Good Flexibility, Low Toxicity, Low Voltage Insulation
KLJ EPR 80	0.92±0.02	82±3	≥11	≥400	±30	±30	≤175	±15	≤5	≥1x10 <sup>11</sup>	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	IEC 60502-2-EPR, IS 6380 IE-2, IS 6380 IE-1	Good Flexibility, Low Toxicity, Low Voltage Insulation
KLJ EPR 95	0.94±0.02	90±3	≥12	≥400	±30	±30	≤175	±15	≤5	≥1x10 <sup>11</sup>	No crack	No crack	≥300	≤2.2	≤0.004	≥25	N/A	IEC 60502-2-EPR, IS 6380 IE-2, IS 6380 IE-1	Good Flexibility, Low Toxicity, Low Voltage Insulation
KLJ EPR FR	1.02±0.02	92±3	≥10	≥400	±30	±30	≤175	±15	≤5	≥1x10 <sup>11</sup>	No crack	No crack	≥300	≤2.2	≤0.004	≥25	V0	Fire Survival Test conducted on a resulting insulated cable as per IEC 332 Part 3 Category B	Good Flexibility, Low Toxicity, Low Voltage Insulation

**Remark** :- Suitability of the product for particular application must be verified before use.

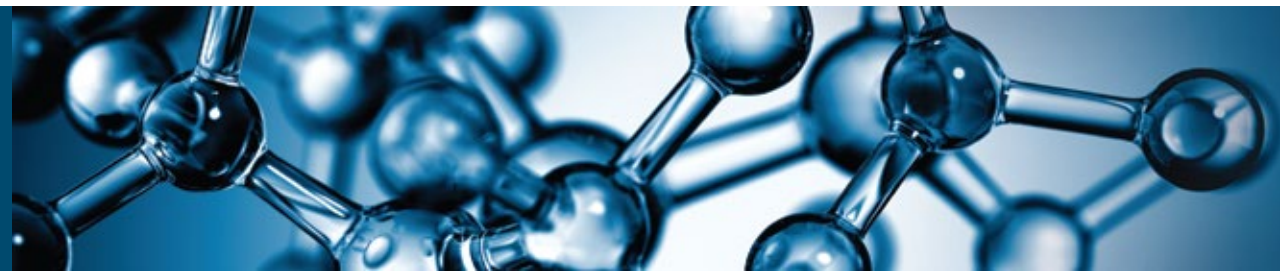
The above details represent only few of our grades, please contact us with your exact requirement to choose from our exhaustive range or for customization, including REACH/ RoHS compliant grades and Antir-Rodent/Anti-Termite grades. The properties as given above are as per the applicable standard, the Compounds are designed to exceed the properties/specifications & the typical value will be on the better side. Please contact for the exact value.



Pioneer in Polymer Compounding with an installed capacity of over 200,000 tps & expanding

High capacity Automated Plants to ensure consistent quality at strategic locations i.e. Silvassa, Agra & Kutch (upcoming)

**PRODUCTS RANGE OF COMPOUNDS**  
 PVC | Sioplas | Peroxide |  
 Semi Conductive | EPR | ZHFR | PO | 3LP |  
 PP | EP | TPR | TPE | EVA |  
 Colour/Performance Masterbatch



## Product Range

- VINYL** | PVC Compound  
Footwear, Wire & Cable, Medical, Automotive, Sports, Profile, Rigid, etc. Dedicated lines for Phthalate Free grades & Clean Room for Medical & Food grade
- XL** | Sioplas PE Insulation Compound  
Silane Grafted XLPE for MV (35 KV), LV, Aerial Bunched, FR, Forced/Ambient curable
- PX** | Peroxide PE Insulation Compound  
Peroxide XLPE for CCV Lines (up to 72 KV)
- SEM** | Semi Conductive Cable Compound  
Black Semi Conductive Compounds for Shielding of Conductor & Insulation. Bonded & Strippable
- EPR/XLPO** | EPR/XLPO Compound  
Cross Linkable EPR Cable Compound (up to 35 KV)
- ZHFR** | Zero Halogen Flame Retardant Compound  
Sheathing and Insulation for Wires & Cables for a wide range of applications including cross-linkable grades
- PO** | Polyolefin Compound  
HDPE/MDPE/LDPE/LLDPE Compounds for Insulation & Sheathing
- 3LP** | HDPE Compound  
Polyolefin based Compound for 3 layered Steel Pipe
- PLENE** | Polypropylene Compound\*  
Automotive, Appliance, Electronic & Electrical, etc.
- EP** | Engineering Polymer Compound\*  
ABS, ASA, SAN, PA6, PA66, PBT, PET, PPO, PPE, PC, POM & varieties of blends and alloys for Automotive, Appliance, Electronic & Electrical, etc.
- FLEX** | TPR & TPE Compound  
Footwear, Medical, Profile, Pen Grip, Tooth Brush Grip, Pipe Gasket, Polymer Modifier, etc.
- VA** | EVA Compound  
Footwear

## APPLICATIONS

- Wires & Cable
- Footwear
- Medical Equipment/ Medical Device
- Automotive
- Railways
- Defence
- Appliance
- Electrical & Electronic
- Flexible Profile
- Engineering
- Flexible & Rigid Moulding
- Packaging
- Hygiene
- Sports
- Irrigation
- Flooring/Sheeting
- Rigid Profile
- Pipe Coating
- Hose Pipe
- Stationery
- Heating Pipe
- Gasket
- Mining

## MASTERBATCHES

- VMB** | PVC Masterbatch
- PMB** | PE Masterbatch
- UMB** | Universal Masterbatch

Colour/Performance Masterbatches (e.g., UV, Anti-Rodent, Anti-Termite, FR, etc.)

REACH/RoHS/Phthalate Free grades also available

\* IATF 16949:2016, ISO/IEC 17025:2017, ISO 9001:2015, ISO 14001:2015, ISO 13485:2016 Certified

**Our 55,000 sqft. State-of-the-Art R&D centre enables KLJ Group to be at the forefront of the latest Development & Product Innovation.**

**Clear focus on R&D keeps the Group ahead of the competition and provides Customized Solutions to their Customers.**

**APPLICATION DEVELOPMENT**  
 \* Pilot Plants of various capacities  
 \* FTIR \* UV \* GCs  
 \* Autoclaves \* Rheometer

**APPLICATION PLANTS**  
 \* Wire \* Sole \* Foam Sole  
 \* Film \* Tubing  
 \* Injection Moulding  
 \* Flammability  
 \* High Voltage Test