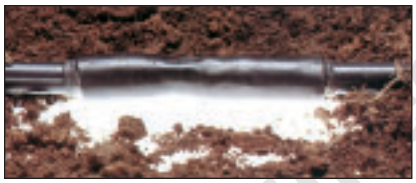
Shrink-Kon®
Heavy Wall Heat Shrinkable Tubing

T&B's heat shrinkable tubing is made of thermally stabilized cross-linked polyolefin. This provides a recovered wall thickness greater than that of the cable jacket replaced. The insulating covers which have an internally applied sealant offer protection against moisture, may be used over lead, steel, aluminum, copper, standard plastic and elastomeric insulating materials.



HS Series

- Heavy wall heat shrinkable tubing provides maximum reliability for insulating and protecting cable joints and terminations.
- Withstands severe mechanical requirements of U.R.D., submersible and direct burial installations.
- High impact, abrasion, corrosion and chemical resistance.
- Rated for 600V, 90°C continuous use.
- Thermoplastic adhesive liner provides complete environmental protection and insulation.
- Meets: UL 486D, CSA C22.2 No. 198.2, ANSI C119.1, Western Underground Guide Numbers 2.4, 2.5, ICEA and NEMA insulation thickness requirements.
- Continuous operating temperature: -55°C to 110°C. Shrink temperature 120°C. Shrink ratio: 3:1.

Black

Cat. No.	Min. Expanded I.D. (in.)	Min. Expanded I.D. (mm)	Max. Recovered I.D. (in.)	Max. Recovered I.D. (mm)	Nom. Recovered Wall (in.)	Nom. Recovered Wall (mm)	Std. Lgth.	Fits Any Listed or Certified Al or Cu Splice with Dim No Larger Than O.D.	Fits Any Listed or Certified Al or Cu Splice with Dim No Larger Than Lgth.	Cable Range
HS16-12							3 in.			
HS16-12L	.350	8.9	.120	3.0	.070	1.8	6 in.	17/64"	1"	#14 to #10
HS16-12-4							4 ft.			AWG
HS12-6							3 in.			
HS12-6L	.510	13.0	.160	4.1	.090	2.4	6 in.	3/8"	1 3/4"	#8 to #6
HS12-6-4							4 ft.			AWG
HS6-1							4 in.			
HS6-1L	.750	19.1	.240	6.1	.090	2.4	8 in.	5/8"	2 1/2"	#6 to #2
HS6-1-4							4 ft.			AWG
HS4-30							5 in.			
HS4-30L	1.100	27.9	.350	8.9	.120	3.0	9 in.	3/4"	3 1/4"	#1 to 3/0
HS4-30-4							4 ft.			AWG
HS40-400							8 in.			
HS40-400L	1.500	38.1	.470	11.9	.160	4.1	12 in.	—		2/0 to 350
HS40-400-4							4 ft.			MCM
HS500-1000							9 in.			250 MCM
HS500-1000L	2.00	50.6	.630	16.0	.160	4.1	15 in.	—		to
HS500-1000-4							4 ft.			600 MCM
HS12-30**							12 in.			750 MCM
HS30-30**	3.540	89.9	1.180	30.0	.160	4.1	30 in.	—		to
HS30-4**							4 ft.			1250 MCM
HS12-40**							12 in.			1500 MCM
HS30-40**	4.720	118.9	1.570	39.9	.170	4.2	30 in.	—		to
HS40-4**							4 ft.			2500 MCM

Red

Cat. No.	Min. Expanded I.D. (in.)	Min. Expanded I.D. (mm)	Max. Recovered I.D. (in.)	Max. Recovered I.D. (mm)	Lgth. (in.)	For 2-Way Connector Cable Sizes
HS12-6LR	.510	13.0	.160	4.1	6	8-6 AWG
HS6-1LR	.750	19.1	.240	6.1	8	6-2 AWG
HS4-30LR*	1.100	27.9	.350	8.9	9	1-3/0 AWG

All lengths have factory applied sealant.
For other sizes and lengths including flame retardant grades, contact your Regional Sales Office.
U.L. File No. E9809, U.L. 486D
** Not CSA Certified*
*** Not U.L. Listed*
T&B Recommended up to 1 kV.

Shrink-Kon®

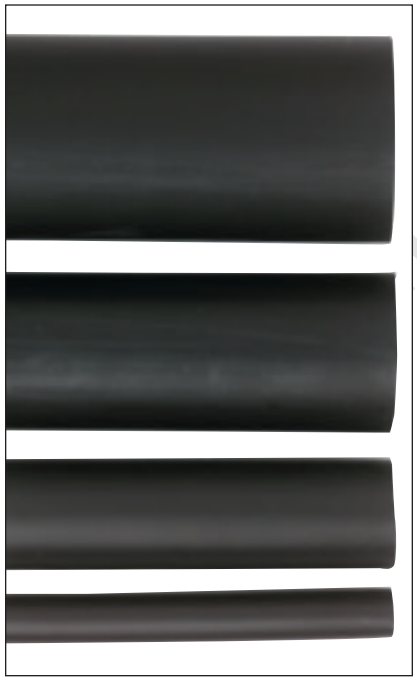
Heavy Wall Heat Shrinkable Tubing

Shrink Ratio 3:1

Heavy Wall Tubing (25 ft rolls)—Black

Cat. No.	Min. Expanded I.D. (in.)	Min. Expanded I.D. (mm)	Max. Recovered I.D. (in.)	Max. Recovered I.D. (mm)	Nominal Recovered Wall (in.)	Nominal Recovered Wall (mm)
HS16-12-25	.350	8.9	.120	3.0	.070	1.8
HS12-6-25	.510	13.0	.160	4.1	.090	2.4
HS6-1-25	.750	19.1	.240	6.1	.090	2.4
HS4-30-25	1.100	27.9	.350	8.9	.120	3.0
HS40-400-25	1.500	38.1	.470	11.9	.160	4.1
HS500-1000-25	2.000	50.6	.630	16.0	.160	4.1

Order by reel, not by feet. 25 ft reels not supplied with factory applied sealant.



Technical Data

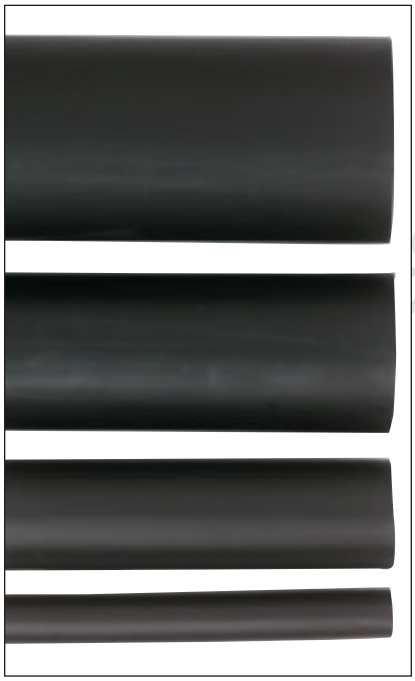
Property	Test Method	Typical Performances
PHYSICAL		
Tensile Strength	ASTM D412, ISO37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	600%
Elongation after Heat Aging (168 hrs. at 150°C)	ASTM D2671	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Longitudinal Change on Recovery	ASTM D2671	+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No cracking
Specific Gravity	ASTM D792	1.1
Hardness (Shore D)	ASTM D2240	50D
ELECTRICAL		
Dielectric Strength	ASTM D149	500 V/Mil (20 kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown, 24 kV–1 min., 15 kV–4 hrs.
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053	Good to Excellent
Fungus Resistance	ASTM G21	No Growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
ADHESIVE		
Adhesive Lap Shear (1 in./min. at 23°C)	ASTM D1002	125 psi (.875 MPa)
Adhesive Softening Point	ASTM E28	92°C ±5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion

HSHR Series – High Shrink Ratio 6:1

- 6:1 shrink ratio.
- Accommodates a wide variety of connector shapes and configurations.
- Thermoplastic Adhesive Liner for complete environmental protection and insulation.
- Continuous operating temperature: -55°C to 110°C.
- Shrink temperature: 120°C.

Cat. No.	Minimum Expanded I.D. (in.)	Minimum Expanded I.D. (mm)	Maximum Nominal Recovered I.D. (in.)	Maximum Nominal Recovered I.D. (mm)	Recovered Wall (in.)	Recovered Wall (mm)	Standard Length (in.)	Standard Length (m)
HSHR750-4	.75	19.0	.125	3.2	.103	2.6	48	1.2
HSHR1300-4	1.30	33.0	.222	5.5	.118	3.0	48	1.2
HSHR1750-4	1.75	44.4	.293	7.4	.128	3.3	48	1.2
HSHR2000-4	2.00	50.8	.330	8.3	.132	3.4	48	1.2
HSHR2750-4	2.75	69.8	.460	11.7	.139	3.5	48	1.2
HSHR3500-4	3.50	88.9	.580	17.1	.146	3.7	48	1.2
HSHR4700-4	4.70	119.4	.780	22.9	.152	3.9	48	1.2

Standard colour: black.
Custom lengths available. Contact your Regional Sales Office for quotations and availability. This item may require longer lead time for ordering. Minimum quantities may apply.



Technical Data

Property	Test Method	Typical Performances
PHYSICAL		
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	600%
Elongation after Heat Aging (168 hrs. at 175°C)	ASTM D2671	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No Cracking or Flowing
Longitudinal Change on Recovery	ASTM D2671	+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No Cracking
Specific Gravity	ASTM D792	1.10
Hardness (Shore D)	ASTM D2240	50D
ELECTRICAL		
Dielectric Strength	ASTM D149, IEC 243	500 V/Mil (20 kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown 15 kV – 4 hrs.
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053/15	Good to Excellent
Fungus Resistance	ASTM G21	No Growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
ADHESIVE		
Adhesive Lap Shear (1 in./min. at 23°C)	ASTM D1002	125 psi (.875 MPa)
Adhesive Softening Point	ASTM E28	92°C/-5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Water Penetration	STM 706	No Penetration After 236 hrs. of Continuous Immersion

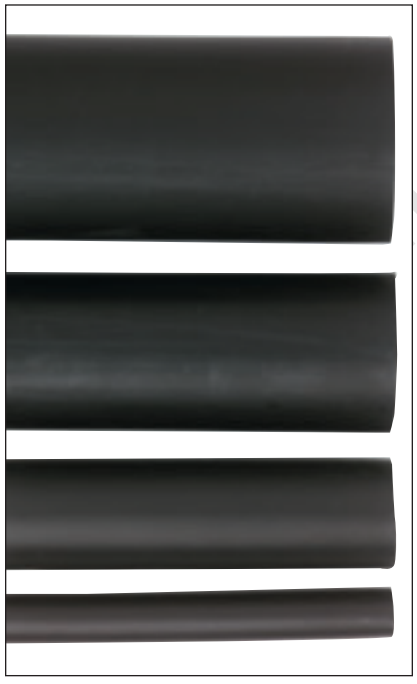
Flame Retardant Heavy Wall Heat Shrinkable Tubing

HSFR Series – Flame Retardant Heavy Wall

- Heavy wall, heat shrinkable tubing insulates and protects electrical splices and terminations where maximum flame retardancy and exceptional insulating and sealing characteristics are required.
- High impact and abrasion resistance – capable of withstanding severe mechanical abuse of U.R.D., submersible and direct burial installations.
- HSFR tubing will not split or rupture during installation, even when overheated.
- Thermoplastic adhesive liner provides complete environmental protection and insulation.
- Meets: UL 486D, CSA 22.2 No. 198.2, ANSI C119.1, Western Underground Guide Nos. 2.4, 2.5, MIL-DTL-23053/15, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA S-19-8 and NEMA insulation thickness requirements.
- Rated for 600V, 90°C continuous use. Continuous operating temperature: -55°C to 110°C. Shrink temperature: 120°C. Shrink ratio: 3:1.

Cat. No.	Cable Range	Minimum Expanded I.D. (in.)	Minimum Expanded I.D. (mm)	Maximum Recovered I.D. (in.)	Maximum Recovered I.D. (mm)	Nominal Recovered Wall (in.)	Nominal Recovered Wall (mm)	Standard Length (in.)	Standard Length (m)
HSFR16-12-4	#14 to #10 AWG	.350	8.9	.120	3.0	.070	1.8	48	1.2
HSFR12-6-4	#8 to #6 AWG	.510	13.0	.160	4.1	.090	2.4	48	1.2
HSFR6-1-4	#6 to #2 AWG	.750	19.1	.240	6.1	.090	2.4	48	1.2
HSFR4-30-4	#1 to 3/0 AWG	1.100	27.9	.350	8.9	.120	3.0	48	1.2
HSFR40-400-4	2/0 to 350 MCM	1.500	38.1	.470	11.9	.160	4.1	48	1.2
HSFR500-1000-4	250 to 600 MCM	2.000	50.6	.630	16.0	.160	4.1	48	1.2

Standard colour: black.
Custom lengths available. Contact your Regional Sales Office for quotations and availability. This item may require longer lead time for ordering. Minimum quantities may apply.



Technical Data

Property	Test Method	Typical Performances
PHYSICAL		
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	600%
Longitudinal Change on Recovery	ASTM D2671	+1%, -10%
Specific Gravity	ASTM D792	1.2
Elongation after Heat Aging (168 hrs. at 175°C)	ASTM D2671, ISO 37	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No Cracking or Flowing
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No Cracking or Splitting
Hardness (Shore D)	ASTM D2240	50D
Oxygen Index	ASTM D2863	27.00
Flammability	ASTM D2671	Flame Retardant
ELECTRICAL		
Dielectric Strength	ASTM D149	500 V/Mil (20 kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown 24 kV – 1 min., 15 kV – 4 hrs.
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053/5	Good to Excellent
Copper Corrosion	ASTM D2671	No Corrosion
Fungus Resistance	ASTM G21	No Growth
Water Absorption	ASTM D570	0.2%
ADHESIVE		
Adhesive Lap Shear (1 in./min. at 23°C)	ASTM D1002	125 psi (.875 MPa)
Adhesive Softening Point	ASTM E28	92°C ±5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Adhesive Water Absorption	ASTM D570	Less than 0.3%
Water Penetration	STM 706	No Penetration After 236 hrs. of Continuous Immersion

Shrink-Kon®
Heat Shrinkable End Caps

Seals and insulates cable ends at a 600V rating. Installs fast, while providing insulation resistance to moisture corrosion and abrasion. The extra thickness at the tip of the end cap prevents sharp ends of the cable from puncturing the seal.

HSC Series End Caps

- Redesigned for superior durability and performance!
- Heat shrinkable end caps provide a simple yet effective method for sealing cable ends, pipe conduit, or other similar objects where maximum flame retardancy is required.
- Superior resistance to weathering, moisture contamination and adverse environmental conditions.
- Flame retardant.
- Rated from 600/1000V, 90° continuous use.
- Resistant to common fluids and solvents.
- Adhesive liner provides complete environmental protection and insulation.
- Heat indicating lines. Continuous operating temperature: -55°C to 110°C.
- Shrink temperature: 120°C.
- Shrink ratio: 3:1.

Cat. No.	Code Cable Size	Minimum Expanded (in.)	Minimum Expanded (mm)	Maximum Recovered I.D. (in.)	Maximum Recovered I.D. (mm)	Recovered Wall (in.)	Recovered Wall (mm)	Nom. Lgth. (in.)	Nom. Lgth. (mm)
HSC8-4	#8 - #6	.510	13.0	.160	4.1	.090	2.4	2 1/2	.0635
HSC2-20	#6 - #2	.750	19.1	.240	6.1	.090	2.4	2 1/2	.0635
HSC30-250	#1 - 3/0	1.100	27.9	.350	8.9	.120	3.0	3	.0762
HSC300-600	2/0 - 350 MCM	1.500	38.1	.470	11.9	.160	4.1	3 1/4	.0826
HSC700-1000	250 - 500 MCM	2.000	50.6	.630	16.0	.160	4.1	3 1/2	.0889
HSC750*	600 - 1000 MCM	2.700	68.6	.87	22.0	.160	4.1	4	.1016
HSC300	800 - 1250 MCM	3.500	89.9	1.180	30.0	.160	4.1	4 1/2	.1143
HSC500	1500 - 2500 MCM	4.700	118.9	1.570	39.9	.170	4.2	5 1/2	.1397

** Not CSA Certified*
Material: Thermally stabilized, modified polyolefin provided with mastic sealant on I.D. applied approximately 1" deep.

Technical Data

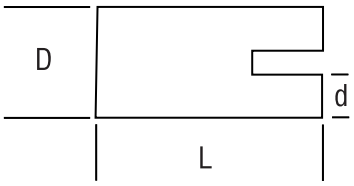
Property	Test Method	Typical Performances
PHYSICAL		
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	550%
Elongation after Heat Aging (168 hrs. at 150°C)	ASTM D2671	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No Cracking or Flowing
Longitudinal Change on Recovery	ASTM D2671	+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No Cracking
Specific Gravity	ASTM D792	1.10
Hardness (Shore D)	ASTM D2240	50D
ELECTRICAL		
Dielectric Strength	ASTM D149	500 V/Mil (20 kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053	Good to Excellent
Fungus Resistance	ASTM G21	No Growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
ADHESIVE		
Adhesive Lap Shear (1 in./min. at 23°C)	ASTM D1002	130 psi (.91 MPa)
Adhesive Softening Point	ASTM E28	92°C ±-5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000 (mod.)	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Water Penetration	STM 706	No Penetration After 236 hrs. of Continuous Immersion
Room temperature	168 hrs./40 psi	No Leaks
Temp. Cycling (-40°C to 60°C)	50 cycles/15 psi	No Leaks
Burst pressure		100 psi (0.70 MPa)

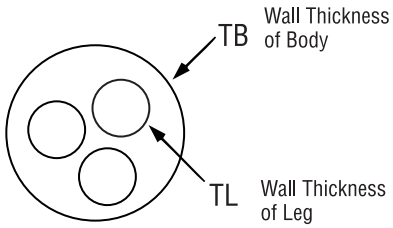
Shrink-Kon®
Heat Shrinkable Breakout Boots

Heat Shrinkable Breakout Boots

- Boots for 2, 3 and 4 way cable breakouts.
- Strain relief and mechanical protection.
- Thermoplastic adhesive liner provides complete environmental protection and insulation.
- Shrink ratio accommodates a wide range of cables.
- Meets ESI 09-11.
- Continuous operating temperature: -55°C to 100°C.
- Shrink temperature: 135°C.

		D		d		L	TB	TL	
Cat. No.	No. Legs	Expanded Dia. (Max.) in./mm	Recovered Dia. (Min.) in./mm	Expanded Dia. (Max.) in./mm	Recovered Dia. (Min.) in./mm	Recovered Length (Nom.) in./mm	Wall Thickness of Body (Nom.) in./mm	Wall Thickness of Leg (Nom.) in./mm	Application Legs 600V Conductor AWG/MCM
HSB200-75-2	2	1.97/50.0	0.83/21.0	0.90/22.9	0.30/7.6	4.69/119.0	0.13/3.2	0.13/3.2	#3-300
HSB120-50-3	3	1.50/38.1	0.65/16.5	0.50/12.7	0.16/4.0	4.47/113.5	0.11/2.9	0.11/2.9	#8-3/0
HSB170-82-3	3	2.20/55.8	1.20/30.4	0.89/22.5	0.35/9.0	7.09/180.0	0.12/3.0	0.12/3.0	#1-600
HSB240-112-3	3	2.83/72.0	1.46/37.0	1.38/35.0	0.69/17.5	7.01/178.0	0.16/4.0	0.12/3.0	300-1000
HSB125-50-4	4	1.38/35.0	0.59/15.0	0.47/12.0	0.12/3.0	3.74/95.0	0.10/2.5	0.08/2.0	#12-2/0
HSB175-82-4	4	2.36/60.0	1.18/30.0	0.90/22.9	0.25/6.4	7.95/202.0	0.16/4.1	0.13/3.3	#4-600
HSB265-120-4	4	3.10/78.7	1.50/38.1	1.40/35.6	0.49/12.50	9.45/240.0	0.13/3.3	0.13/3.3	3/0-1000
HSB350-138-3	3	3.54/90.0	1.38/35.0	1.34/34.0	0.55/14.00	7.87/200.0	0.12/3.0	0.08/2.0	4/0-1000
HSB430-157-3	3	4.33/110.0	1.57/40.0	1.38/35.0	0.69/17.50	7.01/178.0	0.16/4.0	0.12/3.0	300 -
HSB490-200-3	3	4.92/125.0	2.00/50.8	2.32/59.0	1.00/25.40	11.14/283.0	0.15/3.8	0.15/3.8	750 -
HSB520-135-4	4	5.25/133.4	1.35/34.3	3.00/76.2	0.55/14.00	10.02/254.4	0.13/4.1	0.16/4.1	4/0 -





Technical Data

Property	Test Method	Typical Performances
PHYSICAL		
Tensile Strength	ASTM D412, IEC 540	2120 psi (14.6 MPa)
Ultimate Elongation	ASTM D412, IEC 540	600%
Elongation after Heat Aging (168 hrs. at 175°C)	ASTM D412, IEC 540	520%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No Dripping, Cracking, Flowing
Low Temperature Flexibility (-55°C)	ASTM D2671	No Cracking
Flammability	ASTM D630	Self Ext. Within 1.97"
ELECTRICAL		
Dielectric Strength	ASTM D2671	280 V/Mil (11 kV/mm)
CHEMICAL		
Water Absorption	ASTM D570	0.03%