



**WHA YU INDUSTRIAL CO., LTD. (HEAD OFFICE)**

**TAI HWA ELECTRONIC CO., LTD.(CHINA)  
SHANGHAI HUA YU ELECTRONIC CO., LTD.(CHINA)**

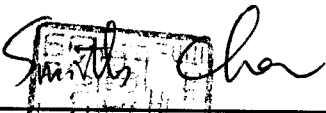
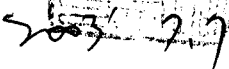
**SPECIFICATION FOR APPROVAL**

**CUSTOMER:** 中磊科技股份有限公司

**PART NAME:** RF Antenna Assembly

**PART NO:** **REVISION:**

**W. Y. P / NO.:** C147-510016-A **REV.:** X1

	<b>MANUFACTURER SIGNATURE</b>	<b>CUSTOMER SIGNATURE</b>
<b>APPROVED BY :</b>		
<b>DATE :</b>		

**WHA YU GROUP**

**WHA YU INDUSTRIAL CO., LTD. (HEAD OFFICE)  
譚裕實業股份有限公司**

Address: #70 Shui Li Road, Hsin Chu City, Taiwan, R.O.C.  
Tel: + 886-3-5714225 (REP)  
Fax: + 886-3-5713853 • + 886-3-5723600

**TAI HWA ELECTRONIC CO., LTD. (CHINA)  
台樺電業製品廠**

Address: Pak Ho District, Hou Street Town,  
Dong Guan City, Guangdong, China  
Tel: + 86-769-5599375 • + 86-769-5912375  
Fax: + 86-769-5599376

**SHANGHAI HUA YU ELECTRONIC CO., LTD. (CHINA)  
上海華裕電子有限公司**

Address: Lian Ho Village, Bai Ho Town, Qing  
Pu Country Shanghai, China  
Tel: + 86-21-59741348 • + 86-21-59743624  
Fax: + 86-21-59741347

# ***INDEX***

<i><b>Item</b></i>	<i><b>Content</b></i>	<i><b>Page</b></i>
1. ....	天線規格表	..... 1
2. ....	成品圖	..... 2
3. ....	測試報告	..... 3~5
4. ....	<b>Cable</b> 規格	..... 6~9
5. ....	天線桿套材質特性	..... 10~16
6. ....	天線固定座材質特性	..... 17
7. ....	<b>Connector</b> 材質特性	..... 18~27
8. ....	膠水特性及黏著力測試	..... 28~32

# RF Antenna Cable Assembly

## Specification

### 1. Electrical Properties :

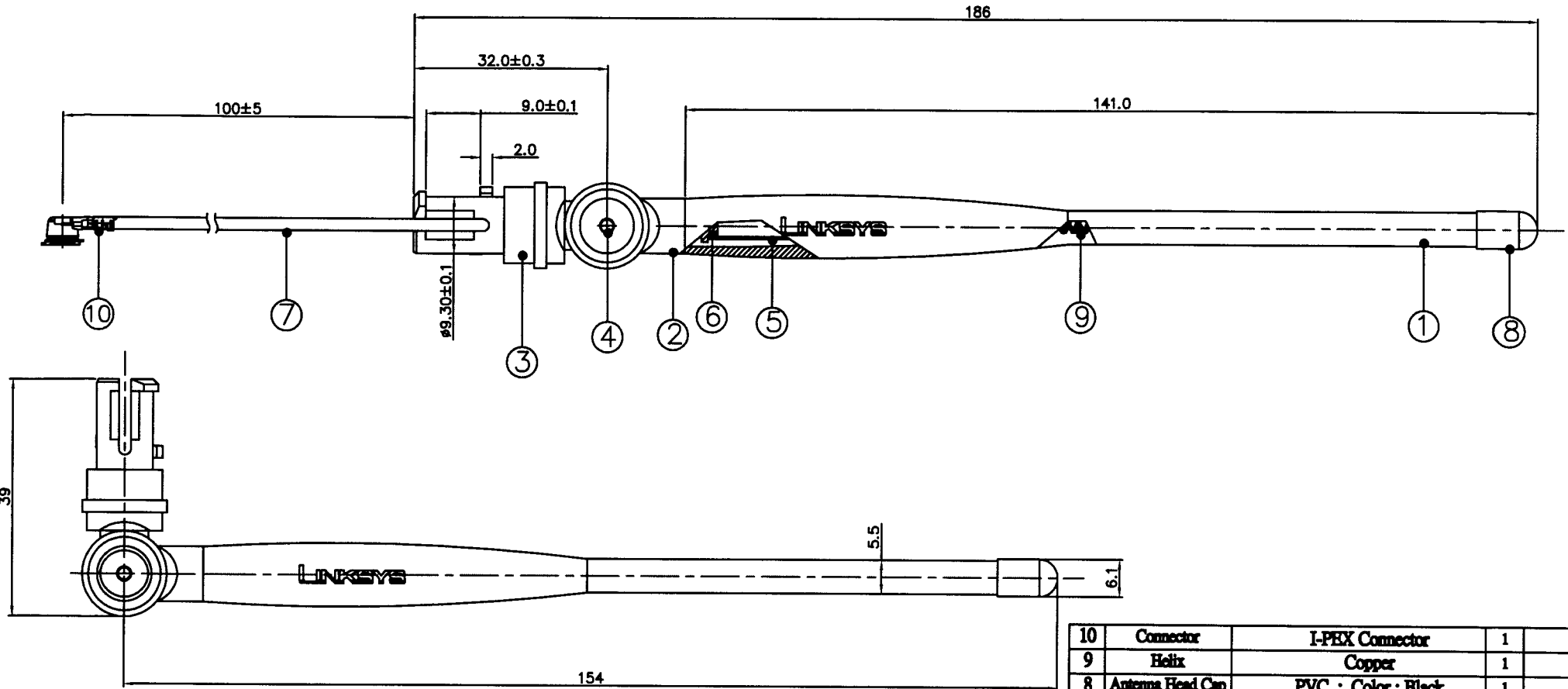
- 1.1 Frequency Rang..... 2.4GHz ~ 2.5GHz
- 1.2 Impedance .....  $50\Omega$  Nominal
- 1.3 VSWR .....2.0 Max.
- 1.4 Return Loss..... -9.5 dB Maximum
- 1.5 Electrical Wave.....  $1/2 \lambda$  Helix
- 1.6 Gain..... 3.3 dBi
- 1.7 Admitted Power..... 1W

### 2. Physical Properties :

- 2.1 Cable.....  $\phi$  1.13 Coaxial Cable
- 2.2 Antenna Cover..... TPE
- 2.3 Antenna Base..... PC
- 2.4 Operating Temp. .... -20°C ~ +65°C
- 2.5 Storage Temp. .... -30°C ~ +75°C
- 2.6 Color ..... Black
- 2.7 Connector..... I-PEX

CG-XX

REV	DATE	DESCRIPTION
X1	07/07-2003	New Issue



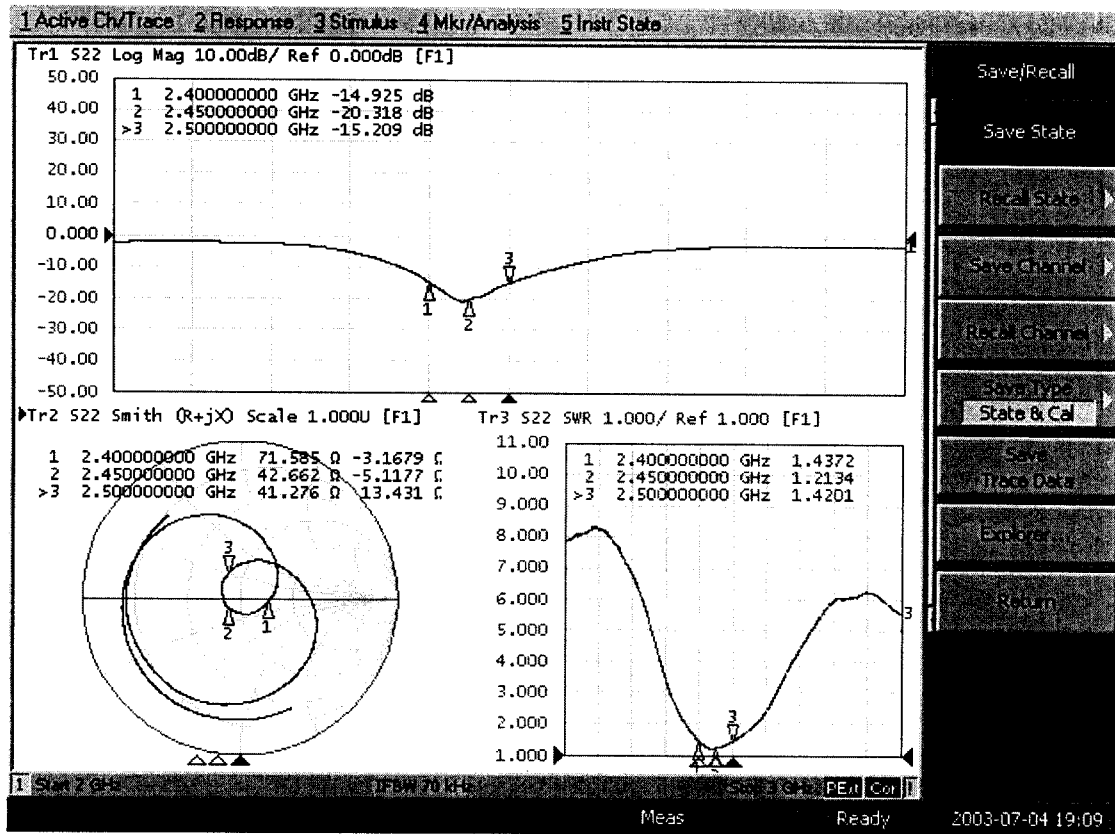
NO	DESCRIPTION	QTY	REMARK
10	Connector	1	I-PEX Connector
9	Helix	1	Copper
8	Antenna Head Cap	1	PVC ; Color : Black
7	Cable	1	φ1.13 Cable
6	Insulator	1	ABS Compound ,White
5	Ground Tube	1	Brass ,Ni Plated
4	Rivet	2	Brass , Cr Plated (Black)
3	Antenna Base	1	PC ; Color : Black
2	Antenna Base	1	PC ; Color : Black
1	Antenna Body	1	TPE ; Color : Black

CUSTOMER'S SIGNATURE

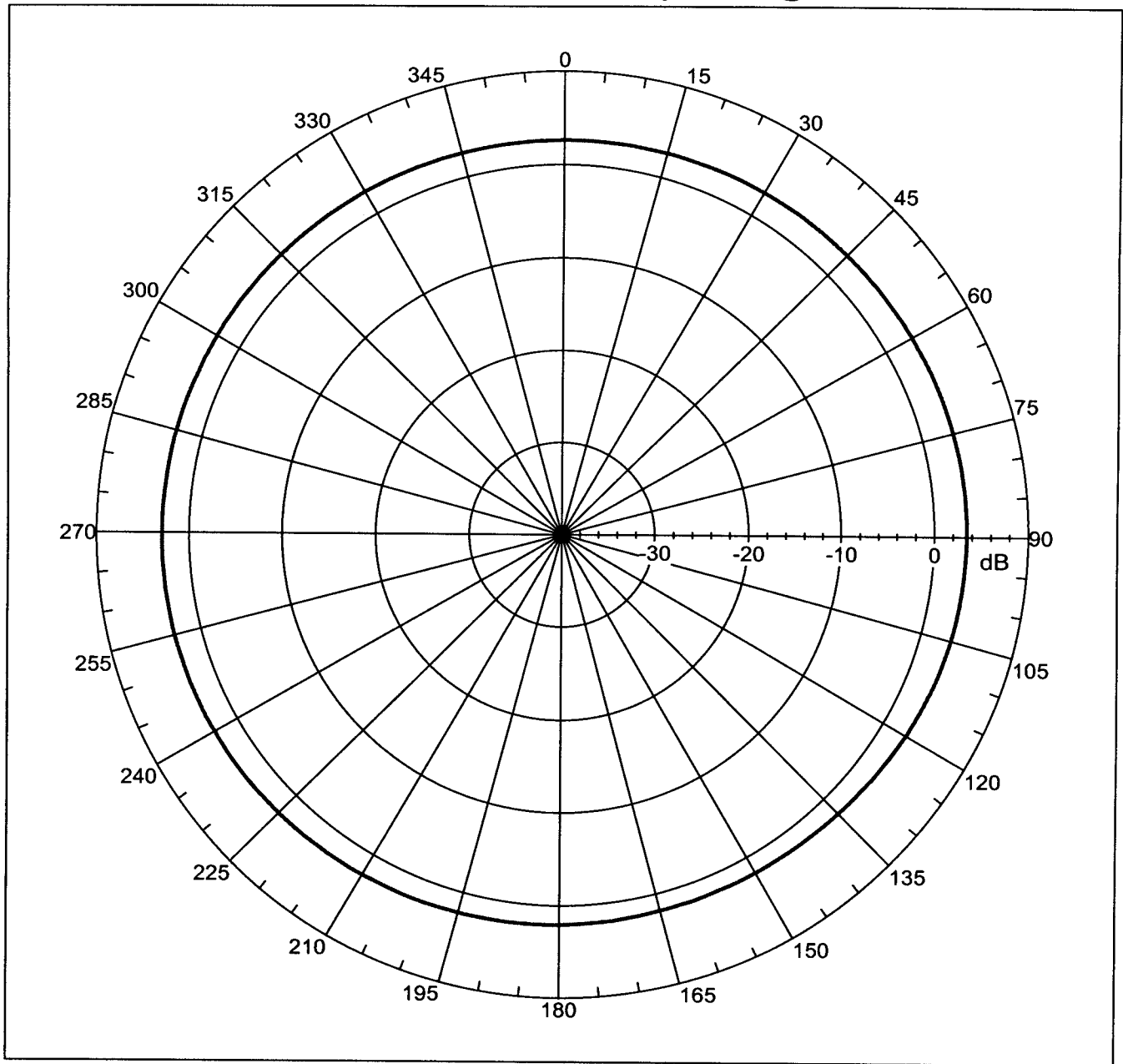
XX	±3.0	APPROVED
X	±2.0	<i>Smith 2/3</i>
X	±1.0	CHECKED
XX	±0.5	<i>pet 2/3</i>
XXX	±0.1	DRAWING

CUSTOMER: 中嘉科技股份有限公司  
 PART NO :  
 PARTNAME: RF Antenna Cable Assembly (2.4G)  
 W.Y P/NO : C147-510016-A  
 REV UNIT FILE :  
 X1 m/m SHEET : 1/1

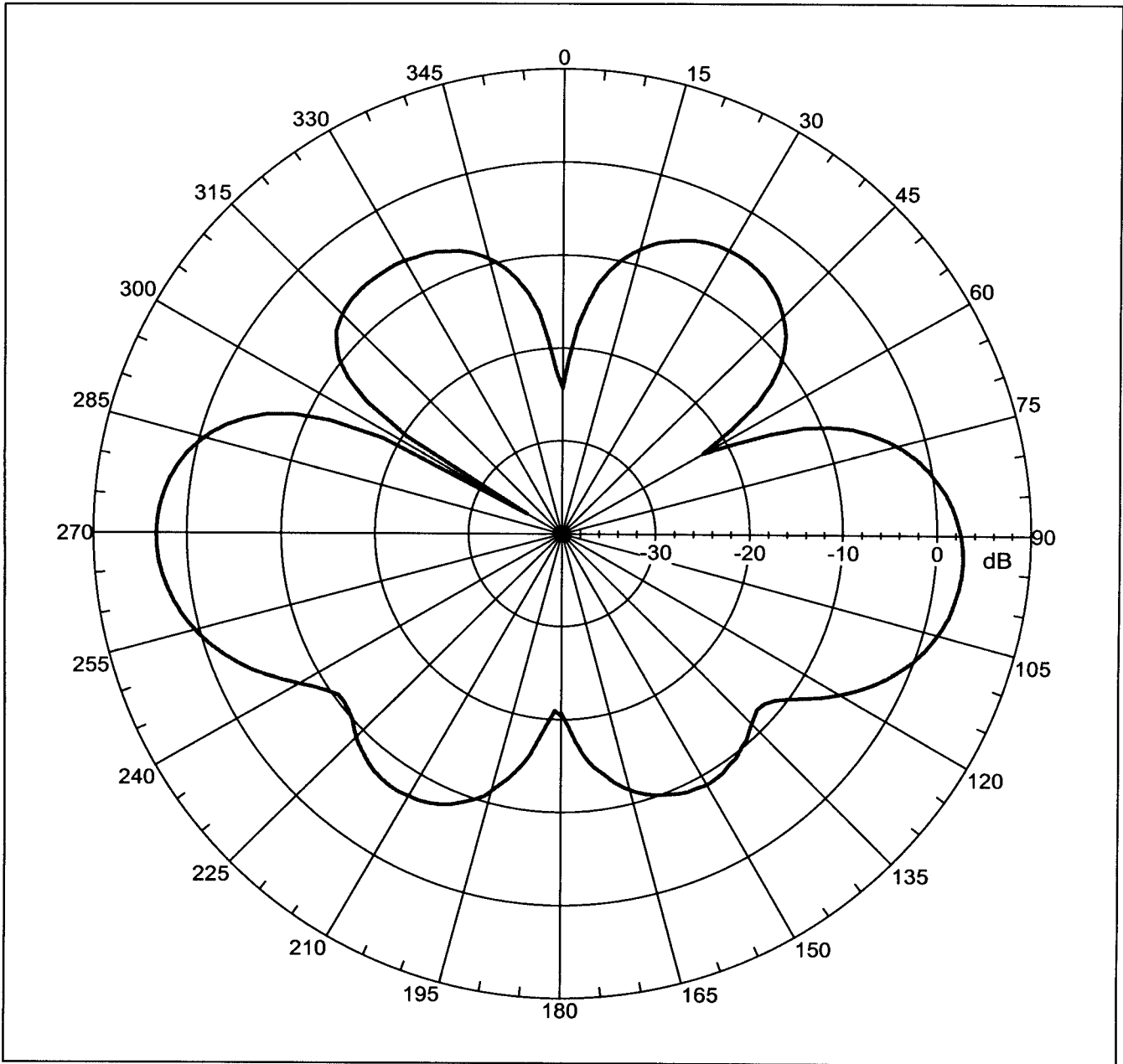
**Wha Yu INDUSTRIAL CO.,LTD.**  
**譚裕實業股份有限公司**  
 THIS DRAWING, AND IT'S INHERANT DESIGN CONCEPTS, ARE THE PROPERTY OF WHA YU AND AS SUCH MAY NOT BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES WITHOUT THE WRITTEN CONSENT OF WHA YU.



# Far-field amplitude of Linksys 2.4g 3.5dbi h.nsi



# Far-field amplitude of Linksys 2.4g 3.5dbi e.nsi



KURABE INDUSTRIAL CO., LTD

SP3830M-X	<b>FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE (FWS 5022)</b>	PAGE	1/4
PRODUCT STANDARD		ISSUED	17-9-2001
		REVISED	

**1. SCOPE**

This standard covers "FEP insulated High-Frequency coaxial cable".

**2. CONSTRUCTION**

Construction and dimensions of the cable are shown in Figure.1 and Table 1.

**3. PERFORMANCE**

Performance of the finished cable is shown in Table 2. The test methods are in accordance with applicable test methods described in JIS C 3005.

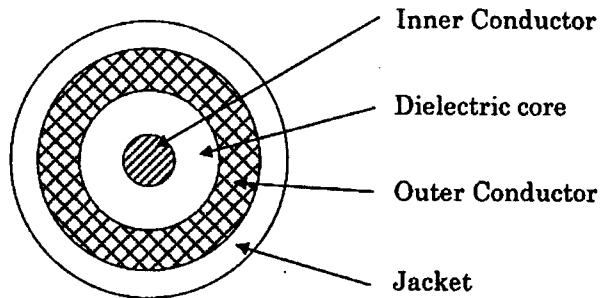


Figure 1.

NOTE :	MADE BY	<i>M. Ohba</i>
	APPROVALS	<i>T. Nagasawa</i>



KURABE INDUSTRIAL CO., LTD

SP3830M-X	<b>FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE (FWS 5022)</b>	PAGE	2/4
PRODUCT STANDARD		ISSUED	17-9-2001
		REVISED	

Table 1. Construction

Item	Unit	Specified Value
Inner Conductor	Material	—
	Stranding	No./mm
	Dia.(approx.)	mm
Dielectric Core	Material	—
	Thick.(nom.)	mm
	Dia.	mm
	Color	—
Outer Conductor	Material	—
	Type	—
	Dia.(approx)	mm
Jacket	Material	—
	Thick.(nom.)	mm
	Dia.	mm
	Color	—

Standard colors are white, black, blue, brown, and gray.

Table 2. Performance

Item	Unit	Specified Value	Note
Appearance	—	Faultless in visible	—
Inner conductor resistance	Ω/km	Max.597	at 20°C
Insulation resistance	MΩ · km	Min.1500	at 20°C
Dielectric strength	—	Dielectric core: No breakdown at AC1.5kV for 0.15sec.	Spark test
		Jacket: No breakdown at AC1.5kV for 0.15sec.	Spark test
		No breakdown at AC500V for 1min.	Outer conductor to inner conductor
Heat resistance for solder	—	Shrink or expansion of dielectric core are not more than 0.5mm	※
Capacitance	pF/m	nom. 98	at 1kHz
Characteristic impedance	Ω	50±2	TDR method
Attenuation (nom.)	dB/m	2.0	1.0GHZ
		2.9	2.0GHZ
		3.6	3.0GHZ
		4.2	4.0GHZ
		4.7	5.0GHZ
		5.2	6.0GHZ

※ After immersion of dielectric core, 10mm into soldering pot which is 230°C for 5 seconds, shrinkage or expansion of the dielectric core must not exceed 0.5mm.

NOTE :	MADE BY	<i>M. Ohba</i>
	APPROVALS	<i>J. Kawabara</i>

**KURABE INDUSTRIAL CO., LTD**

SP3830M-X	<b>FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE (FWS 5022)</b>	PAGE	3/4
<b>PRODUCT STANDARD</b>		ISSUED	17-9-2001
		REVISED	
<p><b>4. INSPECTION</b></p> <p>An inspection is took place in accordance with applicable test methods. The cable has to pass the specifications described Table 1 and Table 2.</p> <p><b>5. TEST METHOD</b></p> <p>The test methods are in accordance with applicable test methods described in JIS C 3005 (Test methods for rubber or plastic insulated wires and cables).</p> <p><b>6. TEMPERATURE RATING</b></p> <p style="padding-left: 40px;">150 °C</p> <p><b>7. VOLATGE LATING</b></p> <p style="padding-left: 40px;">250 V</p> <p><b>8. MARKING ON TAG</b></p> <p>Each reel of finished cable is tagged to indicate following information:</p> <ul style="list-style-type: none"> <li>(1) Designation of the cable,</li> <li>(2) Conductor size,</li> <li>(3) Length,</li> <li>(4) Date of manufacture or LOT No.,</li> <li>(5) Specification No., and</li> <li>(6) Manufacture's name.</li> </ul> <p><b>9. PACKAGE</b></p> <p>The finished cables are cut into a shipping length of 200 meters, reeled to paper bobbin and packed securely to prevent injuries during transportation. Odd length of the finished wires should be accepted for shipping according to the condition of mutual agreement.</p> <p>In the case no agreement is found, the condition stated in quotation shall prevail.</p> <p><b>10. APPLICATION NOTES</b></p> <p>10-1. For use other than the use mutually agreed, compatibility should be carefully confirmed in each practical use by user.</p> <p>10-2. It is recommended to make a trial run for each practical application.</p>			
NOTE :		MADE BY	<i>M. Ohba</i>
		APPROVALS	<i>J. Kasawa</i>

KURABE INDUSTRIAL CO., LTD

SP3830M-X	<b>FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE (FWS 5022)</b>	PAGE	4/4
<b>PRODUCT STANDARD</b>		ISSUED	17-9-2001
		REVISED	
<p>10-3. In case a design for use of cable is changed, please contact our sales department, if necessary. Do not use under extreme mechanical stress such as hard bending, tightening, and twisting. The use under extreme mechanical stress may cause not only shortening the life span of cable but also troubles such as decline of dielectric strength.</p> <p>10-4. Handling precautions</p> <p>① Do not hurt the insulation and sheath of the cable by making holes and scratches. And avoid any sharp edge when wiring so as not to injure cables.</p> <p>② Avoid unnecessary excessive force to cable, such as pulling, twisting, bending or tightening.</p> <p>10-5. Storage precautions</p> <p>Avoid continuous exposure to sunlight.</p>			
NOTE :	MADE BY	<i>M. Ohba</i>	
	APPROVALS	<i>T. Kawasawa</i>	

**Arnitel**

polyether esters  
polyetherester  
esters de polyether

天線桿套材質特性表



Units Einheiten Unites	EM400	EM460	EL550	EL630	EL740	PL380
	1.12	1.16	1.20	1.23	1.27	1.18
°C	195	185	202	212	221	197
μm/m.k	220	160	180	140	110	150
°C	\	\	110	115	120	\
°C	130	150	180	200	200	145
°C	\	50	85	115	150	\
%	0.30	0.30	0.20	0.20	0.15	0.40
%	0.75	0.70	0.55	0.60	0.90	7.0
*	HB	HB	HB	HB	HB	HB
Mpa	55	110	220	375	900	60
Mpa	4.0	7.1	13.2	20.2	26.9	3.5
Mpa	5.4	9.0	15.7	23	22.6	5.2
Mpa	8.4	11.4	16.6	22.0	26.3	8.5
Mpa	17	21	32	40	45	16
%	700	800	600	600	360	450
kJ/m <sup>2</sup>	NB	NB	NB	NB	NB	NB
kJ/m <sup>2</sup>	NB	NB	NB	NB	200	NB
kJ/m <sup>2</sup>	NB	NB	NB	NB	9	NB
kJ/m <sup>2</sup>	NB	NB	20	4	4	NB
	38	45	55	63	74	38
MV/m	\	\	\	\	\	\
Ω.cm	5*10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>12</sup>	10 <sup>12</sup>
Ω	>10 <sup>13</sup>	>10 <sup>14</sup>	>10 <sup>14</sup>	>10 <sup>14</sup>	>10 <sup>10</sup>	>10 <sup>13</sup>
\	4.1	\	\	3.8	\	4.7
\	4.0	4.4	4.0	3.4	3.3	4.4
x10 <sup>14</sup>	10	\	\	3.8	\	310
x10 <sup>14</sup>	170	350	400	350	300	350
\	800	800	600	600	600	800
\	600	600	600	800	800	600

**Aritel**

**2.2 Product coding**

The structure of the Aritel productcodes is illustrated with the following example:

U M 55 1 - V

**Thermoplastic elastomer type:**

- E = polyether ester; polyether = PTHF
- P = polyether ester; polyether = PEO/PPO
- U = polyester ester; (with extra urethane linkages)

**Indication of viscosity range or processing technique**

- L, M = injection moulding and extrusion
- B = blow moulding grade

Indication of hardness (Shore D)

Serial number

**Indication of additives, performance**

- H = heat-stabilized
- L = light/UV stabilized
- V = flame-retardant (not V-0)
- S = flame-retardant (V-0)

Figure 2.2: Aritel product coding

**2.3 Product portfolio**

The Aritel productrange is available with a hardness from 38 to 74 Shore D. The general Aritel grades are shown in table 2.2. In order to enhance the flexibility of the portfolio a set of masterbatches (a.o. for heat, UV, etc) are on offer (refer to § 2.4).

Because of the development of these masterbatches heat stabilised Aritel P is suggested for application areas where thermo-oxidative stability is an issue. For applications where colour and UV stability is required, the Aritel E range is advised.

	Shore D					
	38	40	46	55	63	74
<b>Aritel E</b>		EM400	EM460	EL550 EM550	EL630 EM630	EL740 EM740
<b>Aritel P</b>	PL380		PL460	PL580 PM581		
<b>Aritel U</b>				UM551 UM551-V UM552 UM552-V	UM622	

Table 2.2: Aritel productrange for general purpose

Besides these multi-purpose grades, specialty grades can be offered for specific purposes and/or application areas. These grades are not intended for regular sales and are therefore restricted. Permission from marketing is needed before sampling is initiated.

	Aritel E	Aritel P	Aritel U
<b>Automotive</b>			
• CVJ boots	EB460 EB463 EB464		
• Boyplugs		PL380-M0	
<b>Extrusion</b>			
• Roofing foil	EM402-L		

Table 2.3: Examples of specialty grades

**Arnitel® EL630/EM630**

**2.8.31 General:**

Arnitel is the brand name of a series polyester based thermoplastic elastomers. These polymers combine excellent processability with good elastomeric properties between -40 and 200°C. Arnitel EL630 and EM630 are excellent materials for injection moulding and extrusion applications respectively. The chemical structure of Arnitel EL630/EM630 is shown below.

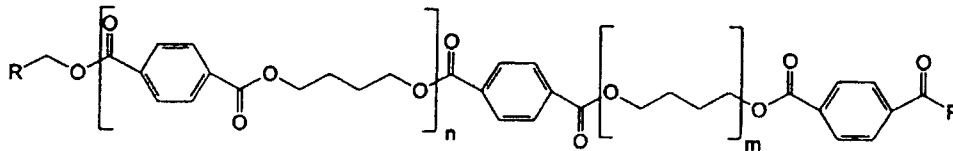


Figure 2.9: Chemical structure of Arnitel EL630/EM630.

Another way of writing the structure of Arnitels is shown below in Figure 2.



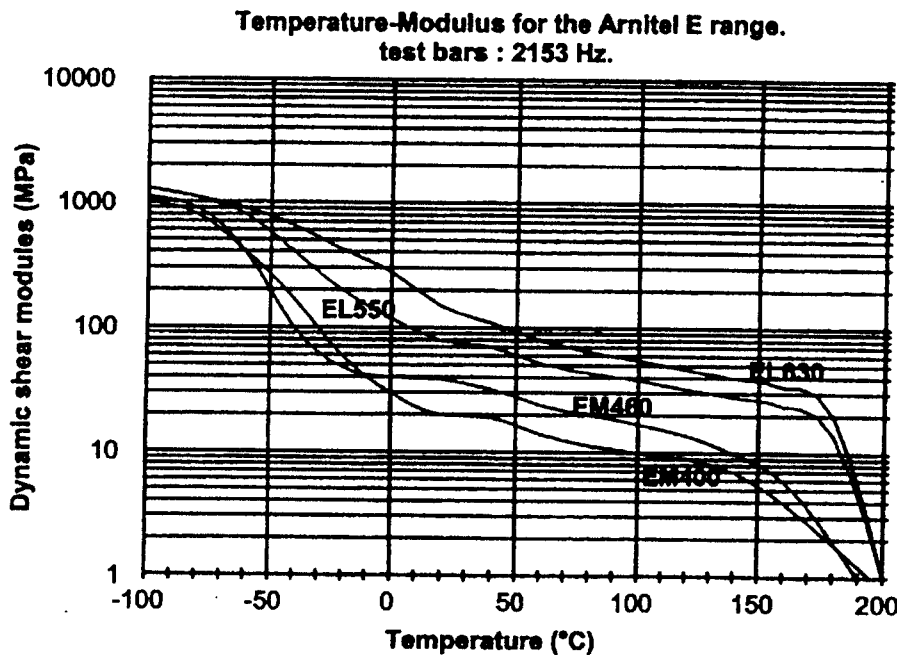
Figure 2.10: Simplified structure of Arnitel EL630/EM630.

Arnitel EL630/EM630 is TOSCA registered (including DSL-Canada) under CAS 37282-12-5

**2.8.32 Thermal properties:**

• **Modulus-temperature behaviour:**

The materials have a glass transition at circa -40°C and a typical melting point at 213°C. The modulus-temperature behaviour is shown in graph 2.76, for comparison, accompanied by other Arnitel E types.



Graph 2.76: Modulus-temperature behaviour of Arnitel EL630/EM630.

**Amitel® EL630/EM630**

Although information on performance at higher temperatures may be extracted from the above shown graph, a Vicat or HDT are shown in table 2.29.

analysis	SI unit	typical data	test method
Vicat A	(°C)	200	ISO 306/A
Vicat B	(°C)	125	ISO 306/B
HDT-B	(°C)	115	ISO 75-1

Table 2.29: Vicat and HDT data on Amitel® EL630 and EM630

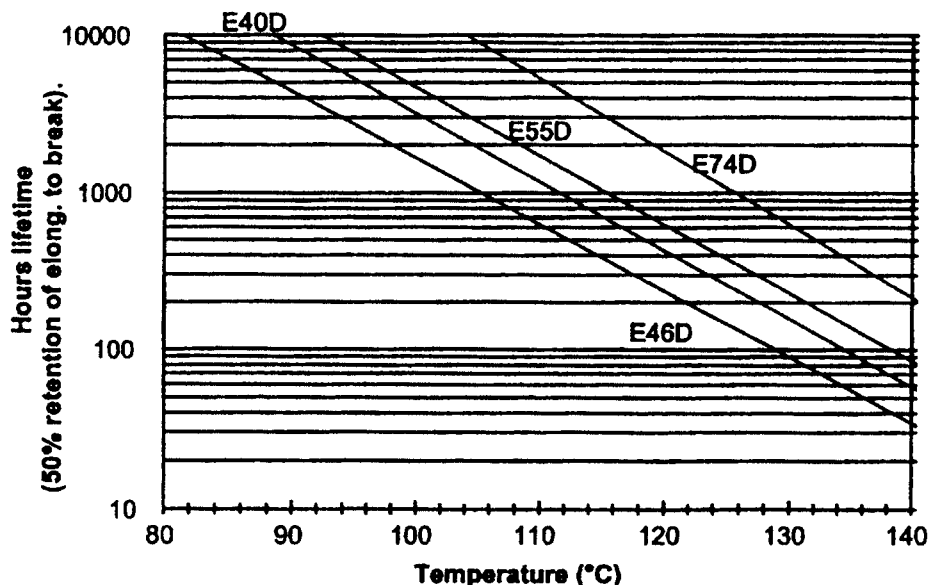
Amitel EL630 and EM630 have a melting point of 213°C as found in the second heating curve of a DSC. The polymer will crystallize at 155°C using a 20°C/min cooling rate. The thermal expansion coefficient of Amitel EL630/EM630 and is  $140 \cdot 10^{-4} \mu\text{m/m.K}$ .

• **Heat aging:**

Amitel EL630/EM630 shows an optimum between heat resistance and colour stability. Heat aging for EL630/EM630 is under test at this moment, however the data will be between EL550 and EL740. Arrhenius curves of thermo-oxidative heat aging are shown in graph 2.77. Criterium chosen is retention of 50% original elongation at break.

**Heat aging of Amitel E40D, 46D, 55D and 74D.**

**Natural products, Arrhenius plot.**



Graph 2.77: Heat stability for Amitel E-range.

Heat ageing can be improve using a stabilisation masterbatch, however for heat stabilisation the P-range is preferred for it's excellence in performance. These data can be found in the Amitel properties summary or an Amitel P datasheet.

**2.8.33 Processing and Handling:**

Amitel EL630/EM630 is a polyester with a density of  $1.12 \text{ g/cm}^3$  according ISO 1183. Due to the polyester nature of these materials it is of major importance to store the material dry prior to processing. Materials packaged in sealed packaging should have a moisture content lower then 500 ppm. The polymer will contain 0.12% moisture in 50% RH and 0.58% water after saturation in water. Both numbers are in equilibrium. If samples have become wet during storage a drying step of 24 hours  $120^\circ\text{C}$  (or 6 hours  $140^\circ\text{C}$ ) prior to use will prevent degradation of the material during processing combined with an eventual loss of properties. The air or nitrogen will have to have a dew point of at least  $-30^\circ\text{C}$ .

**Arnitel<sup>®</sup> EL630/EM630**

• **Processing:**

Arnitel EL630/EM630 shows a single melting point at 195°C in DSC. Processing conditions are shown in the table below.

polymer	zone 1	zone 2	zone 3	additional	melt	mold
EL630	225	230	235	235	225-235	20-50
EM630	225	230	235	235	235	50

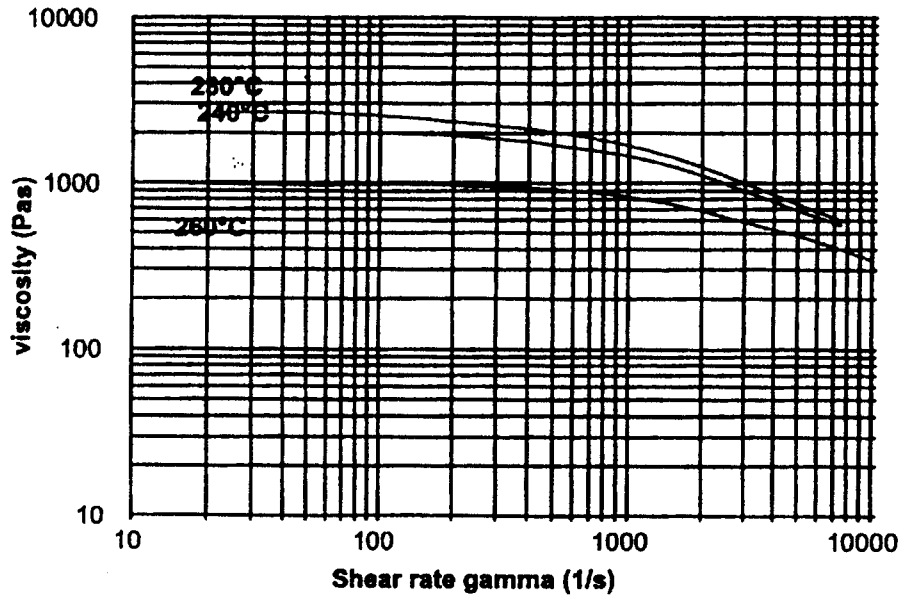
All temperatures are in °C.

Table 2.30: Processing conditions for Arnitel EL630 and Arnitel EM630.

• **Rheology:**

The temperature depending melt viscosity of Arnitel EL630/EM630 and are shown below in graph 2.80 and 2.81 respectively.

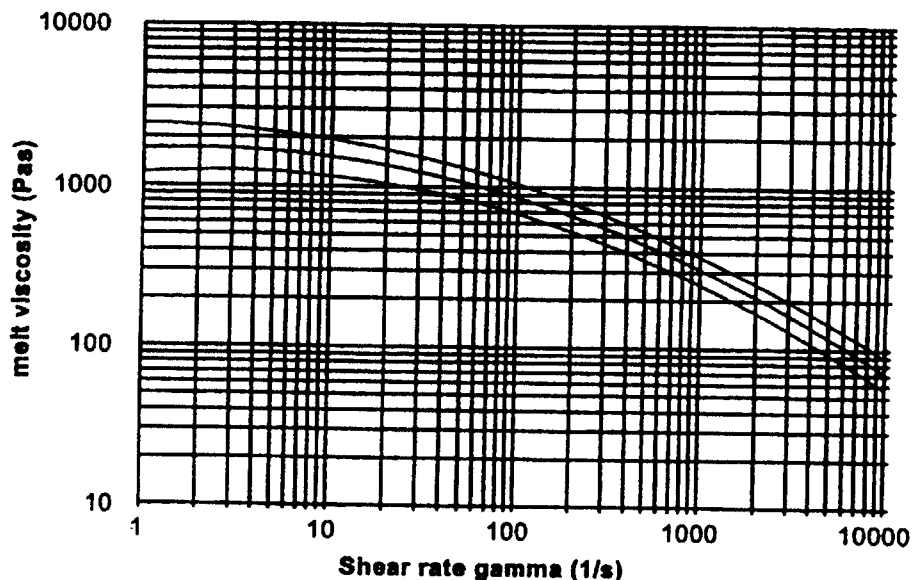
**Shear rate dependent of the melt viscosity of Arnitel EL630.  
Effect of melt temperature.**





Arnitel® EL630/EM630

Capillar melt viscosity of Arnitel EM630.  
240, 250 and 260°C.



Graph 2.80 and 2.81: Temperature dependency of the melt viscosity for Arnitel EL630 and EM630 .

The MFI values are shown in table 2.31.

		EL630	EM630	
MFI 230°C	g/10 min		7	ISO 1133
MFI 240°C	g/10 min	30		ISO 1133

Table 2.31: MFI for Arnitel EL630/EM630.

• Use of regrind:

Arnitel can readily be recycled. If the MFI of the regrind is up or down to four points higher, 20% can be recycled. A difference of 2 MFI points allows up to 50% of regrind. Obviously the regrind should be dried properly before use.

2.8.34 Mechanical properties:

If Arnitel EL630 or Arnitel EM630 are processed properly the materials will have mechanical properties as shown in table 2.32.

Mechanical property	SI Unit	typical data*		test method
		EL630	EM630	
Hardness	Shore D	63	63	ISO 868
Tensile modulus (1 mm/min)	MPa	330	330	ISO 527
Tensile strength (50 mm/min)	MPa	30	30	ISO 527
Strain at break	%	350	350	ISO 527
Tensile stress at 5% strain	Mpa	11.5	11.5	
Tensile stress at 10% strain	Mpa	15.9	15.9	
Tensile stress at 50% strain	Mpa	17.3	17.3	
Tear strength Graves	KN/m	145	145	DIN53515
Izod notched 23°C (73°F)	KJ/m <sup>2</sup>	NB	NB	ISO 180/1A
Izod notched -30°C (-22°F)	KJ/m <sup>2</sup>	4	4	ISO 180/1A
Charpy notched 23°C (73°F)	KJ/m <sup>2</sup>	NB	NB	ISO 179/1eA
Charpy notched -30°C (-22°F)	KJ/m <sup>2</sup>	12	12	ISO 179/1eA

\* Data for dry natural materials.

NB: No Break

Table 2.32: mechanical properties of Arnitel® EL630.

**Amitel® EL630/EM630**

• **Abrasion:**

Amitels show good abrasion resistance in both Taber and DIN 53516 abrasion tests. Data are shown in the Amitel general property overview (also included in the EPIC)

**2.8.35 Flame retardancy:**

Amitel EL630 and EM630 show in an ISO1210/A flammability test a burning rate leading to a classification FH-1. Flame retardancy can be improved using a halogenated or halogen free FR masterbatch.

**2.8.36 Electrical properties:**

Amitel EL630/EM630 can be used for cable jacketing applications. If the material is in permanent contact with copper a copper stabilisation package should be added. If the copper wires are coated with a tin layer, no stabilisation is necessary. The electrical properties are shown in table 33.

Electrical property	SI Unit	typical data*		test method
		EL630	EM630	
Dielectric strength	KV/mm	22	22	IEC 243-1
Relative permittivity ( $\epsilon_r$ ) at 1 kHz	-	4.4	4.4	IEC 250
Dissipation factor ( $\tan \delta$ ) at 1kHz	-	0.019	0.019	IEC 250
Comparative tracking index	-	600	600	IEC 112
Volume resistivity	$10^{14} \Omega \cdot \text{cm}$	1	1	IEC 93
Surface resistivity	$10^{14} \Omega$	1	1	IEC 93

Table 2.33: Typical electrical properties of Amitel® EL630 and EM630.

**2.8.37 Chemical resistance:**

Amitel EL630 and EM630 are sensitive to strong bases and strong acids, especially at elevated temperatures. In some halogenated hydrocarbons (like tetrachloroethane), the materials (partially) dissolve. For a full review on chemical resistance of Amitel EL630 and EM630 request the chemical resistance brochure.

• **Hydrolysis**

Like all polyesters Amitel are sensitive to moisture, however Amitels are more stable to water than e.g. PET and PBT. graph 2.84 shows the hydrolytic stability of Amitel EL630 at 100°C and in steam (120°C). For improved hydrolysis stability, using a polycarbodiimid containing masterbatch like Stabaxol® in an option. To maintain all other properties use a masterbatch based on polyester. Data on the Stabaxol stabilised grade are shown in graph 2.85.



# CALIBRE 700 series

## Ignition Resistant Resins

These CALIBRE® resins are formulated and produced to supply both clarity and enhanced ignition resistance. They do so while maintaining excellent physical properties and processability. Grades are available with additives for improved mould release and/or UV stabilisation.

CALIBRE 700: No mould release, no UV stabilisation. CALIBRE 701: Only mould release. CALIBRE 702: Only UV stabilisation. CALIBRE 703: Mould release and UV stabilisation.

### Applications

- Industrial switches
- Circuit breakers
- Plugs, sockets and switches
- Street lights
- Safety lights
- Reflectors

Properties	Test method	Value	Value
Products, Units		700-10	700-15
<b>Physical</b>			
Melt Flow Rate (300°C, 1.2kg), g/10 min.	ISO 1133	10	15
Density, kg/m <sup>3</sup>	ISO 1183	1200	1200
Mould Shrinkage, %	ASTM D-955	0.5-0.7	0.5-0.7
<b>Optical</b>			
Light Transmittance, %	ASTM D1003	84-88	84-88
<b>Thermal</b>			
HDT 0.45 MPa, annealed, °C	ISO 75	144	142
HDT 1.82 MPa, annealed, °C	ISO 75	140	139
HDT 1.82 MPa, unannealed, °C	ISO 75	123	122
Vicat Softening Point (B/50), °C	ISO 306B	149	147
<b>Mechanical</b>			
Tensile Strength at Yield, MPa	ISO 527	60	60
Tensile Strength at Rupture, MPa	ISO 527	66	66
Elongation at Yield, %	ISO 527	6	6
Elongation at Rupture, %	ISO 527	120	120
Tensile Modulus, MPa	ISO 527	2300	2300
Flexural Strength, MPa	ISO 178	100	100
Flexural Modulus, MPa	ISO 178	2400	2400
Izod Notched (23°C), J/m	ISO 180	900	850
Izod Unnotched (23°C), J/m	ISO 180	no break	no break
Charpy Notched (23°C), kJ/m <sup>2</sup>	ISO 179	30	20
<b>Flammability Rating <sup>(1)</sup></b>			
1.6 mm	UL-94	V2	V2
3.2 mm	UL-94	V0	V0
<b>Electrical</b>			
GWT 2.0 mm, 5 sec., °C	IEC 695-2-1	960	960
Ball Indentation Temperature, °C	IEC 598-1 <sup>(2)</sup>	> 125	> 125
Comp. Tracking Index (2.0 mm), V	IEC 112	250	250

(1) These numerical flame spread ratings are small scale test values and are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

(2) Ball Indentation Temperature is described in IEC 598-1.