

1. CHARACTERISTICS

Transition Point (°C)	307
Deformation Point (°C)	328
Softening Point (°C)	350
Thermal Expansion Coefficient 40-250°C (x 10 ⁻⁶ /°C)	6.96
Specific Gravity (g/cc)	6.2
Dielectric Constant 1MHz, 25°C	14
Volume Resistivity log ₁₀ (Ω-cm) at 250°C	9.0
Dielectric Loss Tangent 1 MHz, 25°C	0.022
Acid Durability (mg/cm ²) 1N HCL 25°C 5 min.	0.9
18N H ₂ SO ₄ 50°C, 5 min.	0.4
Thermal Conductivity 25°C (Cal/cm. sec. °C)	0.0043
Alpha Emission (α/cm ² /hr.)	0.8

2. RECOMMENDED PRE-CLEANING

Steps	Solution	Temp.	Period
a. De-scaling	50% H ₂ SO ₄	75°C - 95°C	1 min.
b. Tap water rinse		25°C	2 min. min.
c. Acid washing	10% H ₂ SO ₄ + 10% H ₂ O ₂	25°C	30 seconds
d. Tap water rinse		25°C	2 min. min.
e. Distilled water rinse		25°C	2 min. min.
f. Tin plating		(see below)	

3. RECOMMENDED TIN PLATING CONDITION
3.1 Plating Solution

- Sulphuric Acid Bath

105 cc/liter

30 gram/liter

40 cc/liter

H₂SO₄

SnSO₄

Tinglo Culmo Starter Conc.

- Temperature of Plating Bath 17-21°C

3.2 Current Density – 1.4-2.5 Ampere/SQ DM (Square Decimeter)

3.3 Plating Time 10 Minutes Max.

1. CHARACTERISTICS

Transition Point (°C)	307
Deformation Point (°C)	328
Softening Point (°C)	350
Thermal Expansion Coefficient	
40-250°C (x 10 ⁻⁶ /°C)	6.96
Specific Gravity (g/cc)	6.2
Dielectric Constant 1MHz, 25°C	14
Volume Resistivity	
log ₁₀ (Ω-cm) at 250°C	9.0
Dielectric Loss Tangent	
1 MHz, 25°C	0.022
Acid Durability (mg/cm ²)	
1N HCL 25°C 5 min.	0.9
18N H ₂ SO ₄ 50°C, 5 min.	0.4
Thermal Conductivity	
25°C (Cal/cm. sec. °C)	0.0043
Alpha Emission	
(α/cm ² /hr.)	0.8

2. RECOMMENDED PRE-CLEANING

Steps	Solution	Temp.	Period
a. De-scaling	50% H ₂ SO ₄	75°C - 95°C	1 min.
b. Tap water rinse		25°C	2 min. min.
c. Acid washing	10% H ₂ SO ₄ + 10% H ₂ O ₂	25°C	30 seconds
d. Tap water rinse		25°C	2 min. min.
e. Distilled water rinse		25°C	2 min. min.
f. Tin plating		(see below)	

3. RECOMMENDED TIN PLATING CONDITION
3.1 Plating Solution

- Sulphuric Acid Bath

105 cc/liter

30 gram/liter

40 cc/liter

H₂SO₄

SnSO₄

Tinglo Culmo Starter Conc.

- Temperature of Plating Bath 17-21°C

3.2 Current Density – 1.4-2.5 Ampere/SQ DM (Square Decimeter)

3.3 Plating Time 10 Minutes Max.