

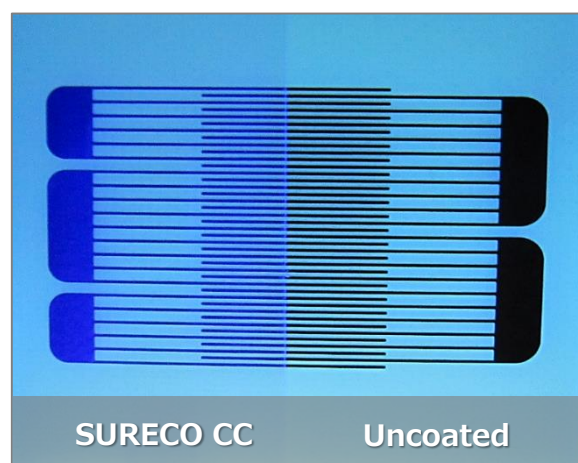
## SURECO™ CC Series

SURECO CC series is surface treatment agent containing a fluorinated polymer compound. By forming a thin layer on a various surface, you can add excellent water repellency, Anti-corrosion property, moisture protection property, waterproof property, and Oil repellency and can use for conformal coating for PCB (Printed Circuit Board) without any dilution process. Applicable for wet coating, for example, dip coating, spraying, brushing etc. and easy to dry.

### 1. Features

- ◆ Excellent water repellency, moisture protection and waterproof property
- ◆ Anti-corrosion property, Oil repellency (better than PTFE resin)
- ◆ Thin (1.0μm) and transparent coating with excellent properties
- ◆ Easy to apply, does not need post-curing (Air-dries in minutes)
- ◆ Thermally stable (decomposition temperature > 200°C)
- ◆ Easy to maintain (Easy to remove by fluorinated solvent, so it can be re-coated)
- ◆ Nonflammable

- ◆ Possible to offer the grade it's visible by fluorescent dye



### 2. Application Ideas

- Moisture, chemical and corrosion protection to Printed Circuit Boards and their components
- Anti-migration coating for displays, spindle motors or lubricated electronic parts

### 3. Grade

Grade	Non-volatile	Touch drying time(25°C)	Complete drying time(25°C)	Specific Gravity (g/ml)	Viscosity (mPa/s)	Sample package	Commercial Package	
SURECO 1102	2 %	< 3 min	< 15 min	1.5	1.5	100 g	1kg	20kg
SURECO 1202	2 %	< 1 min	< 10 min	1.5	1.3	100 g	1kg	20kg

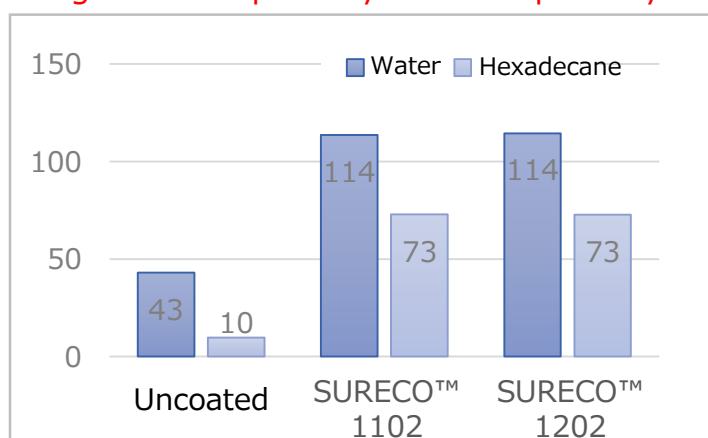
\*If Impossible to expect enough performance by the above grades, higher concentration grade with fluorescent dye is available to offer

### 4. Coating film properties

	Value	Remarks
Density[kg/m <sup>3</sup> ]	1.7×10 <sup>3</sup>	JIS K7112 A-method
Specific heat[J/kg·K]	1.2×10 <sup>3</sup>	JIS K7123
Thermal conductivity[W/m·k[]]	0.13	JIS R1611 (laser flash method)
Decomposition temperature [°C]	236	TG-DTA (* 1)
Glass-transition temperature [°C]	42	DSC method
Young's modulus[MPa] (23°C)	4.0×10 <sup>2</sup>	JIS K7113
Elongation [%] (23°C)	271	
Tensile strength[MPa] (23°C)	6.1	
Linear expansion coefficient [ppm/°C]	1~2×10 <sup>-4</sup> (-100°C~-10°C)	JIS K7197
Insulation resistance[Ω]	1×10 <sup>13</sup> 以上	JIS Z3197
Dielectric breakdown strength [kV/mm]	About 25 (Short time method) About 20 (Step method)	JIS C2110
Volume resistivity value[Ω·cm]	1×10 <sup>15</sup> 以上	JIS K6911
Surface resistance[Ω]	1×10 <sup>14</sup> 以上	
Dielectric constant	3.5 (1kHz)	
	3.2 (1MHz)	
Dielectric tangent	0.02 (1kHz)	
	0.03 (1MHz)	
Moisture transmission coefficient [g·mm/m <sup>2</sup> ·24h]	6.1	JIS Z0208 (Cup method)
Moisture absorption[wt%]	0.1	40°C×90%RH for 24hours
Water absorption[wt%]	<0.5	Immersing in water for 24hours

\* 1) Condition (Air : 400mL/min、rate of temperature increase : 2°C/min、Cell : Pt)

◆Thin (1.0μm) and transparent coating with high water repellency and oil repellency.



## 5. Coating film properties

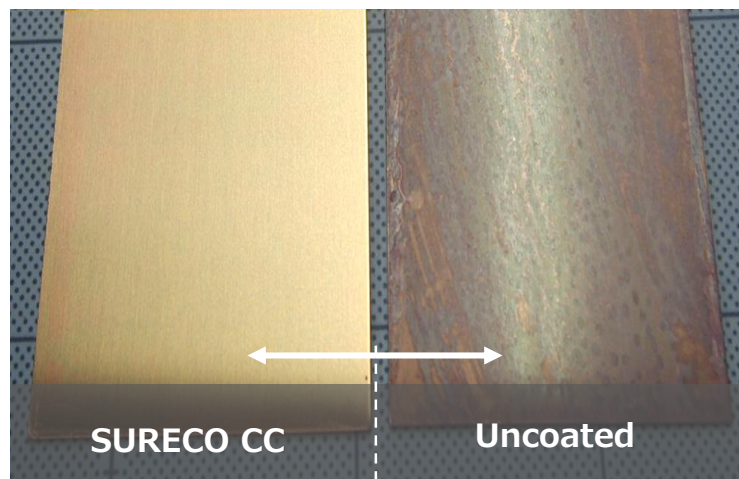
- ◆ It shows moisture proof and corrosion protection performance on a thin film (1 μm).

Evaluation	Standard etc.	Test condition	result
Ion Migration Evaluation	IPC-TM-650	Substrate : Comb electrode (IPC-B-24) Voltage : 100±10 VDC temperature : 25°C + 5 – 2°C65°C±2°C×20cycles (total 160hr) Humidity : 85%~93%RH	<b>Pass</b> (Conduction confirmation)
Salt spray test	JIS Z 2371	Substrate : copper (JISH3100(C1100P)) condition : 5%NaCl/35°C/48hr	<b>Pass</b> (appearance confirmation)
Heat shock test	JIS C 5402	Substrate : copper (JISH3100(C1100P)) condition : -40°C(35min)~85°C(35min)×100cycles (total 117hr)	<b>Pass</b> (appearance confirmation)
High temperature high humidity test	-	Substrate : 銅(JISH3100(C1100P)) condition : 85°C/85%RH/100hr	<b>Pass</b> (appearance confirmation)
UL94V test	UL94V	condition : ①Temperature:23°C/Humidity:50%RH/Min 48hr ②Temperature:70°C/168hr(7days)	<b>Equivalent to UL94V</b>

\* Photograph of comb substrate after ion migration test ↓



\* Photograph of copper substrate after salt spray ↓



# SURECO™ CC Series

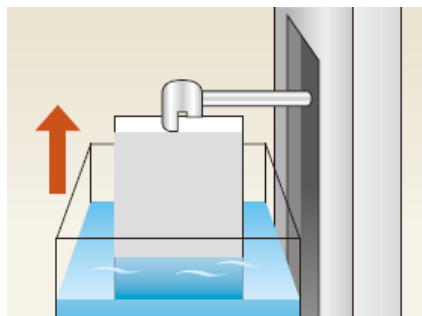
## 6. Processing methods

Possible for dip coating, spraying, brushing etc. and easy to dry in room temperature.

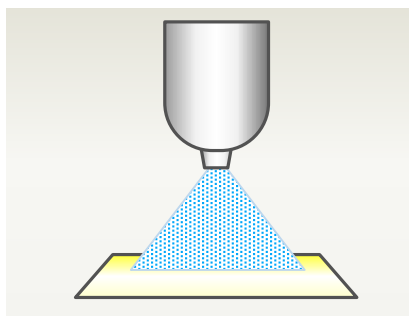
\* Inhalation of aerosol or fine spray mist may cause serious respiratory problems.  
In case you don't have appropriate exhaust equipment, please not apply for spray coating

### Processing example

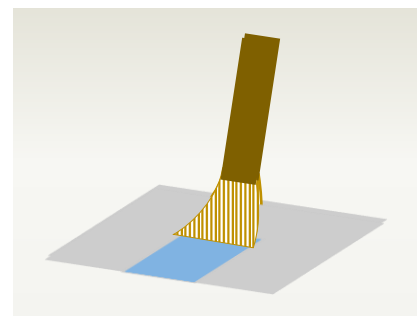
Ex.1 : Dip



Ex.2 : spray



Ex.3 : brushing



**※ Please contact us for other detailed conditions.**

## 7. Precaution

Please check the Safety Data Sheet for further details regarding safe use of this product.