



About UV Light Coating

Silicone 優化製程 - 乾式表面處理

Dry Process on Silicone Surface Treatment

Advantage:

- ▶ No Chemical Agent/ No Allergy Attack
- ▶ Eco-friendly/ No VOC (Volatile Organic Compounds)
- ▶ Simple equipment, No site restrictions
- ▶ Operation easily and quickly



Introduction of the Dry Process on Silicone Surface Treatment

- ▶ Introduction of dry process-Electrochemical synthesis: Silicone rubber is a polymeric elastic material with both inorganic and organic properties in its molecular chain.-Its molecular chain consists of alternating silicon atoms and oxygen atoms (-SI-O-SI-), which modifies the oxygen atoms on the surface of silicone rubber from negative to positive electrodes. By this process, the oxygen atoms +- are activated to form a smooth, delicate, anti-pollution, and non-electrostatic polymer film on the surface of the silicone.

Comparing Dry Process to Wet Process on Silicone Surface Treatment

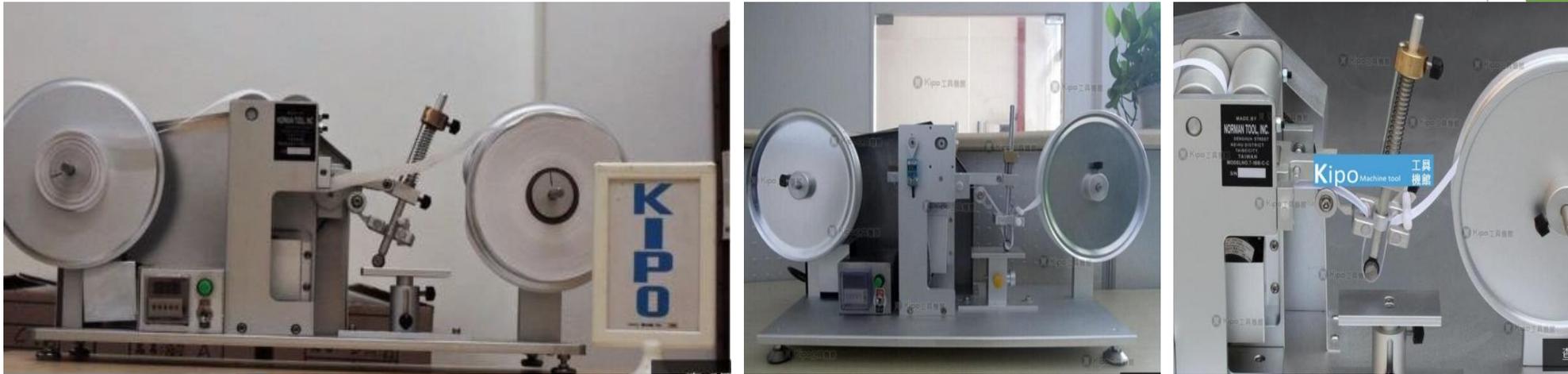
Coating Process	Dry Coating Process	Wet Coating Process	Remark
Environmental Pollution	NO	Air pollution/ Water pollution/Chemical pollution	
Allergy Tested	NO	Easy to get allergy	
Friction Test	14g static rubbing more than 40 times (14克靜磨擦40次以上)	Peel off after 12 grams of static rubbing 20 times (12克靜磨擦20次脫落掉漆)	
Dust resistant test	Excellent	Excellent	
Life Test	Very Good	Accessible to getting worse when environmental changes	
Mass Production	Continuous operation with semi-automation can significantly streamline manpower, and low down the unit cost.	Spraying by hand or auto. machine and baking process, etc...requires a large number of personnel for pass production.	

Measuring and Auditing electrostatic fields in ESD sensitive areas after dry coating process



Tester:	Before Coating	After Coating
TREK511 靜電壓測試儀		
First Test	0.4KV	0.12KV
Second Test	0.5KV	0.10KV
Third Test	0.58KV	0.11KV
Fourth Test	0.65KV	0.12KV

RCA Test After Dry Coating Process



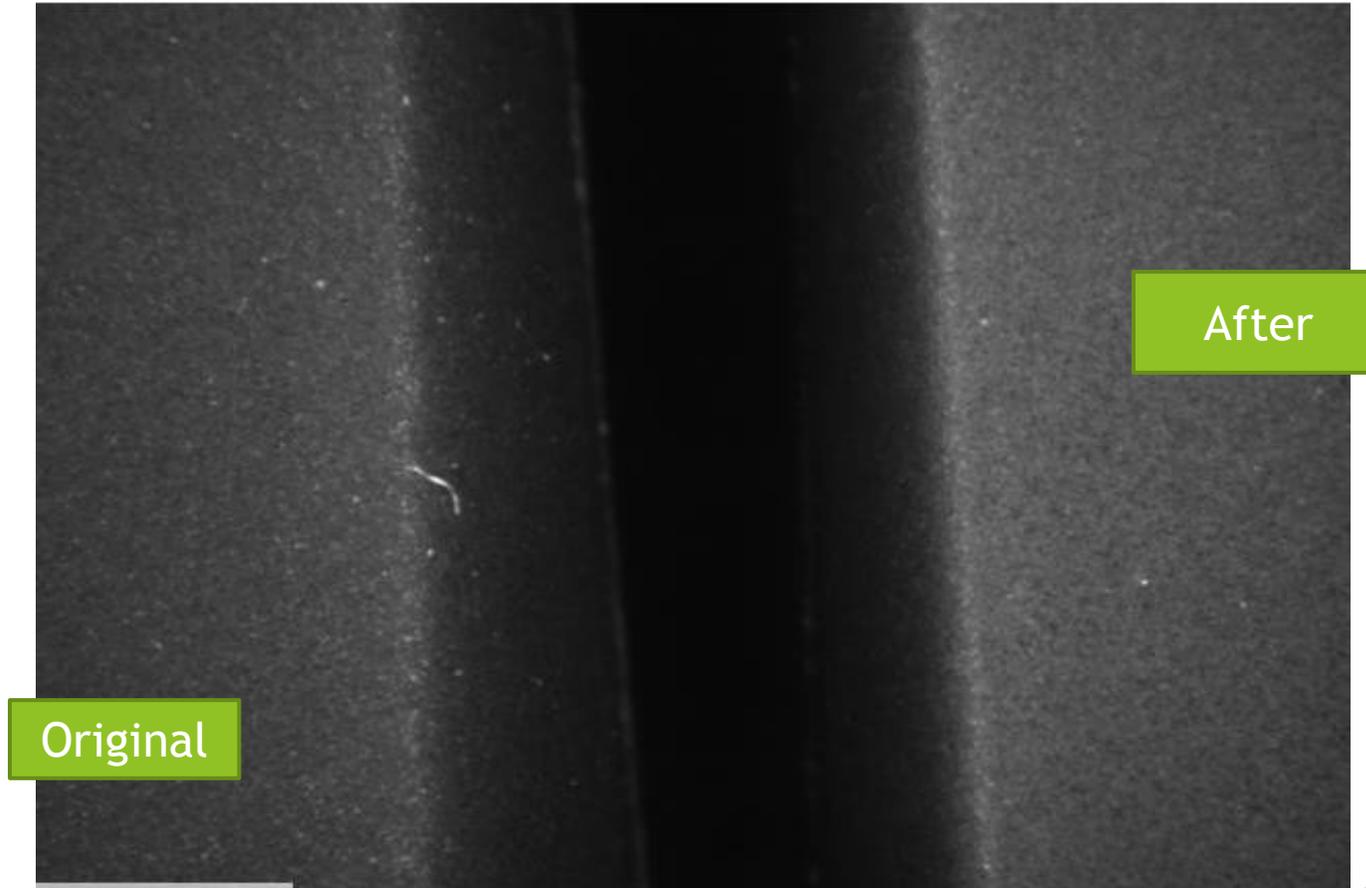
Tester:	Before Coating	After Coating
RCA Abrasion Wear Tester		
First Test	300 times NG	300 times NG
Second Test	300 times NG	300 times NG
Third Test	300 times NG	300 times NG
Fourth Test	300 times NG	300 times NG

Smoothness Test

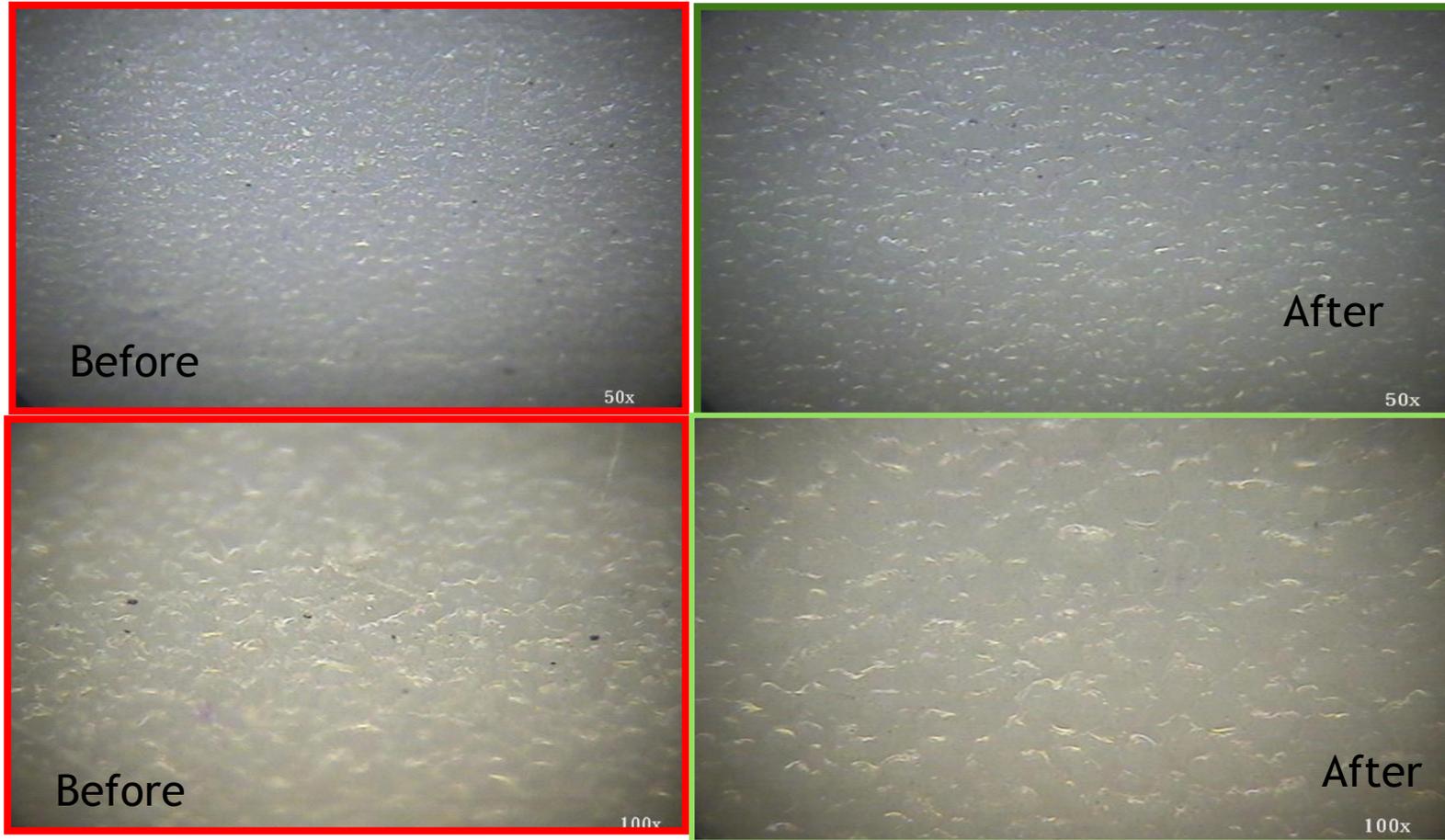
- ▶ About Roughness Gauge Confirmation: Before and after processing :
- ▶ Ra value =
- ▶ Before treatment Ra= **0.28**
- ▶ After treatment Ra = less than **0.1**
- ▶ (The lower the value, the smoother it is)



Comparing to original surface after Dry Coating Process



Microscopic analysis of the surface (before processing in **red** / after processing in **green**)



Microscopic analysis of the surface (before processing in **red** / after processing in **green**)

