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<Instructions of New WS-Ver.2 & OC solution>

1. KH SWCNT New Water solution(G.2)-Ver.2

- Substrate : bare PET, hydrophilic surface
- Coating method:
  - Substrate temp.: 60~70°C
  - Bar-coating: #9(wet thickness: ~20μm)
  - Drying: hot-air drying using hair dryer, or hot-air drying and drying at 70~80°C for 10 minutes
- TCF performance right after coating: R=850~900ohm/sq at TT=80~81%
- Keep it at room temp. for more than 2hrs and the sheet resistance of TCF goes down to R=~600ohm/sq.
- Characteristic of New WS-Ver.2: Even though this is water-based solution, it has good wettability on PET film and it can be well-coated regardless of coating methods, such as spray coating, bar coating, die coating and etc.
- For removal of its surfactant, the prepared TCF can be washed or weak acid-treated and it improves the film conductivity. (Coated CNT layer doesn't peel off by washing.)
- Remarks: To protect CNT layer, it should be over-coated by OC solution. ~5% of transmittance can be improved by over-coating and TCF having R=600ohm/sq at TT>~85% can be obtained.

2. Over-coating solution

- Solvent: Ethanol
- Substrate: SWCNT-TCF prepared by above method 1 (For the purpose of improvement of durability and transmittance of SWCNT TCF)
- Coating method:
  - Substrate temp.: 60~70°C
  - Bar coating: #3(wet thickness~7μm) or #4(wet thickness~9μm)
  - Drying: hot-air drying, or hot-air drying and drying at 70~80°C for 10minutes
- Performance: ~5% of transmittance can be improved by OC solution. When SWCNT TCF is over-coat or heat treated, sheet resistance(R) may temporarily go up and it goes down and stabilizes by keeping TCF at room temp.
- Keep it at room temp. for more than 2hrs and the sheet resistance of TCF goes down from R=900ohm/sq to R=~600ohm/sq.
- Remarks: In case of OC coating, you should bar-coat or die-coat to make smooth OC layer. Improvement of transmittance can't be obtained by spray coating!!