



SUPER HYDROPHOBIC (EASY-TO-CLEAN) COATING FOR PV PANELS AND OTHER APPLICATIONS

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Overview

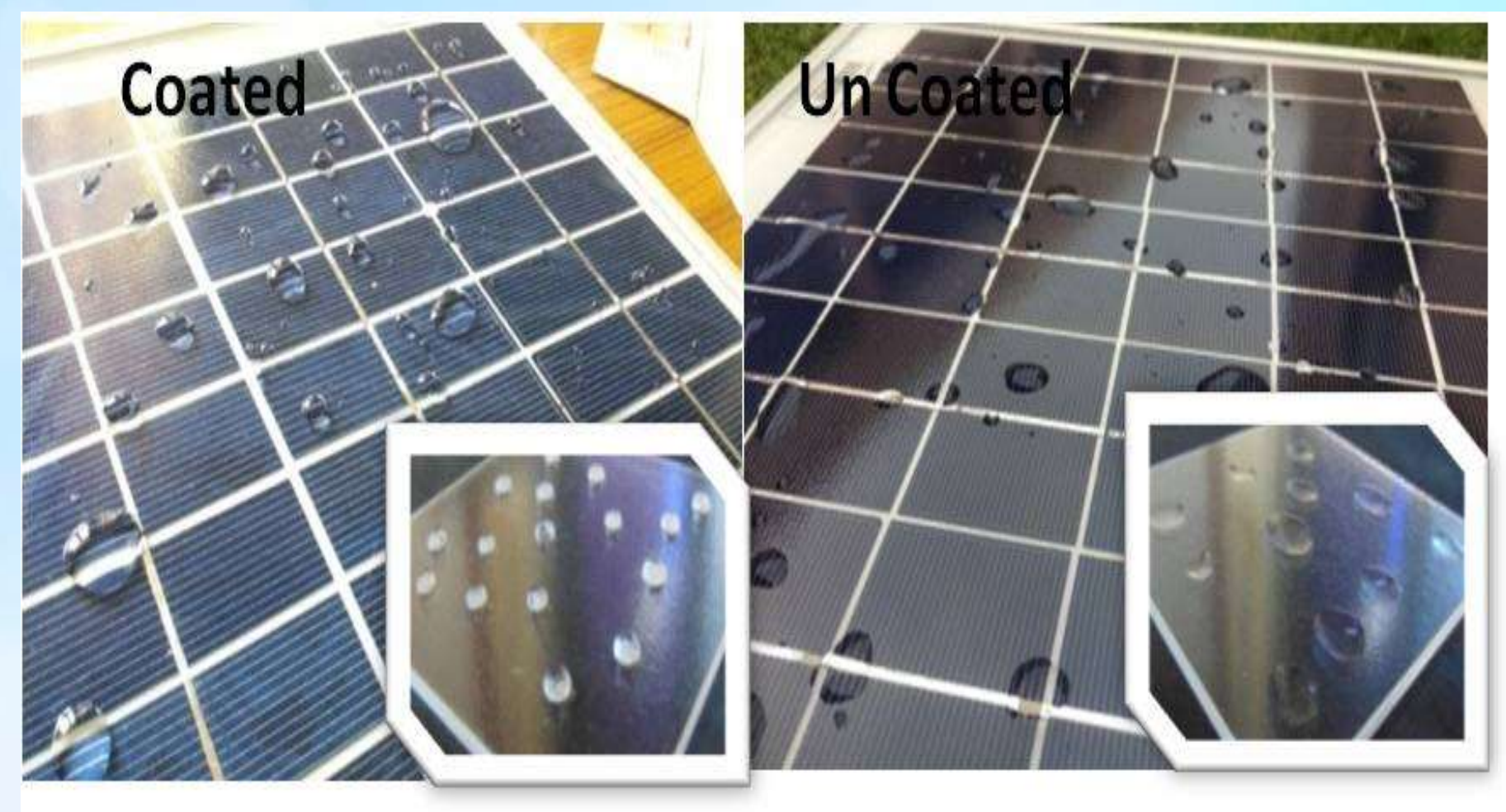
Self clean (easy to clean) technology is generally related to protect the PV panels from dust/dirt, corrosion and all sorts of weather conditions. PV panels are subjected to substantially constant weather and moisture exposure. A general challenge is finding one protective coating (single layer) that has best-in-class qualities of self clean property (easy to clean property), high weather and mechanical stabilities, no loss in transmittance after deposition on PV panels and curable by ambient conditions. ARCI's new technology will provide solution for the above mentioned issues.

Key Features

- Low cost production (simple coating technique / easy scalable / curable by ambient temp.)
- Highly transparent coating (no loss in transmittance / power conversion efficiency after deposition)
- Super hydrophobic property: $> 110^\circ$ water contact angle
- High weather stability (withstand long duration accelerated test (IEC 61646))
- High mechanical stability
- Low dust deposition compared to bare and other commercial coated samples

Applications

- PV panels & reflectors employed in CSP
- Optical lenses
- Video display panels
- Architectural and automotive glasses
- Textiles
- Plastic & concrete surfaces
- Ceramic tiles
- Wooden substrates



ARCI's Coated PV Panel vs. Uncoated PV Panel



Easy-to-clean Coating by Spray & Wipe Method

ARCI's Easy to clean coating technology demonstration to different industries



Technology Status



- The technology has been successfully transferred to NTPC Ltd (for usage in its own plant)
- Apart from NTPC, large-scale technology demonstration & field validation are completed and in process
- Certified by Central Power Research Institute (CPRI)
- Technology is available for transfer on non-exclusive basis