



**IEC 60068-2-68:1994**  
**Dust and Sand test Lc1**  
Confirmation of test results

**VDE Renewables File Ref.: 10011/ ET-20221016-187**

**Applicant:** Wuxi Suntech Power Co., Ltd.  
16 Xin Hua Road, Xinwu District, 214028 Wuxi City, China

**Product:** Crystalline silicon Photovoltaic (PV)-Modules

Type: **A) STPXXXS-C72/Nsh+** **B) STPXXXS-C54/Nshb+**  
**B) STPXXXS-C54/Nsh+** **B) STPXXXS-C54/Nshm+**  
**B) STPXXXS-C54/Nshtb+** **B) STPXXXS-C54/Nshkm+**  
**B) STPXXXS-C54/Nshk+**

XXX in the type replace the power in Watt and can be any number between:

545 – 595 for A);

405 – 445 for B)

**Manufacturer:** Wuxi Suntech Power Co., Ltd.

**Standard:** IEC 60068-2-68, Dust and Sand test Lc1

**Test sequence:** Based on IEC 61701:2011

**Test conditions**

Dust concentration: 4.9 - 5.2 g/m<sup>3</sup>

Wind velocity: 19.1 – 20.4 m/s

Particle size: Variant 3, <590 µm

Dust composition: Quartz, 95% SiO<sub>2</sub>

Testing time: Front side: 4 h, Rear side: 4 h

**Pass criteria:**

Power degradation: < 5%

Dry Insulation: > 40 MΩm<sup>2</sup>

Wet insulation: > 40 MΩm<sup>2</sup>

Ground continuity: < 0.1Ω



### Summary of test results:

**Maximum power degradation:** allowed max. 5 %  
measured max. 0.32 %

The measured degradation is below the allowed degradation.

**Dry insulation resistance:** required min. 15.5 M $\Omega$   
measured >500 M $\Omega$

The measured dry insulation resistance is above the limit.

**Wet insulation resistance:** required min. 15.5 M $\Omega$   
measured >500 M $\Omega$

The measured wet insulation resistance is above the limit.

**Ground continuity test:** required max. 0.1 $\Omega$   
measured max. 0.0038 $\Omega$

The measured ground continuity test is below the limit.

The complete test results and the relevant bill of materials are given in Test Report No.: TRPVM-ET-20221016-187-1.

### VDE Renewables GmbH

**Zhiyao Wang**

**Dean Wen**

Shanghai, 2024-03-26