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**NONFERROUS METALS INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

YS/T 612-2014

Replacing YS/T 612-2006

Paste for solar cells

太阳能电池用浆料

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

Instead of the standard YS/T 612-2006 "solar cell paste." Compared with this standard YS/T 612-2006, the main changes as follows.

--- The solids content of the front side silver paste, silver paste and aluminum paste on the back from 80% to 88%, 75% to 85%, 65% and 80%, respectively Changed from 86% to 92%, 45% to 70%, 70% to 80%;

--- The fineness of the front side silver paste, silver paste and aluminum paste on the back of the original $\leq 15\mu\text{m}$, $\leq 20\mu\text{m}$, $\leq 80\mu\text{m}$ were changed $\leq 10\mu\text{m}$, $\leq 15\mu\text{m}$, $\leq 25\mu\text{m}$;

--- The front side silver paste, silver paste and aluminum paste on the back of the original viscosity of $20\text{Pa} \cdot \text{s} \sim 100\text{Pa} \cdot \text{s}$, $20\text{Pa} \cdot \text{s} \sim 100\text{Pa} \cdot \text{s}$, $150\text{Pa} \cdot \text{s} \sim 450\text{Pa} \cdot \text{s}$ were changed to $260\text{Pa} \cdot \text{s} \sim 750\text{Pa} \cdot \text{s}$, $35\text{Pa} \cdot \text{s} \sim 80\text{Pa} \cdot \text{s}$, $15\text{Pa} \cdot \text{s} \sim 50\text{Pa} \cdot \text{s}$;

--- Increasing the viscosity determination when setting conditions;

--- Increasing the drying temperature front side silver paste, silver paste and aluminum paste on the back of three kinds of slurry and drying time;

--- The firing temperature front side silver paste, silver paste and aluminum paste on the back of the original $720^\circ\text{C} \sim 780^\circ\text{C}$, $650^\circ\text{C} \sim 700^\circ\text{C}$, $600^\circ\text{C} \sim \text{all } 700^\circ\text{C}$ to $760^\circ\text{C} \sim 830^\circ\text{C}$;

--- Increase the adhesion of the aluminum paste was measured after sintering warpage measurement and boiled.

This standard by the national non-ferrous metals Standardization Technical Committee (SAC/TC243) centralized.

This standard was drafted. Your research Platinum Ltd., China Nonferrous Metals Industry

Institute of Standards Metrology and Quality, Guangzhou Branch Xing Ru Technology Development Co., Ltd., Wuhan Optoelectronics Technology Co., gifted musicians.

Drafters of this standard. Zhao Ling, Fan Mingnuo, Xiongqing Feng, TIAN Liang, Zhu Wuxun to Lei, Ding Ice, pay Ming, Xu Shan, Ouyang Yu Jie, Xu Hongmei.

This standard replaces the standards previously issued as follows.

--- YS/T 612-2006.

Solar cell paste

1 Scope

This standard specifies the crystalline silicon solar cell slurry requirements, test methods, inspection rules and signs, packaging, transportation, storage, quality certificate Specification and contracts (or orders) content.

This standard applies to the production of crystalline silicon solar cell front electrode, a back electrode and a back electrode paste field (hereinafter referred to as a slurry).

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 3131 lead solders GB/T 17472 microelectronics precious metal pastes Specification
GB/T 17473.1 microelectronics precious metal pastes Test Method Determination of solid content
GB/T 17473.2 microelectronics testing methods of precious metal pastes fineness determination
GB/T 17473.3 microelectronics precious metal pastes used test method for measuring the resistance party
GB/T 17473.5 microelectronics precious metal slurry viscosity determination test methods
GB/T 17473.7 microelectronics precious metal pastes used test methods weldability, resistance to soldering Determination

3 Terms and Definitions

The following terms and definitions apply to this document.

Front side silver paste silverpasteforfronTSurface which meets the screen printing front electrode for crystalline silicon solar cells by a silver powder, glass powder, additives and organic vehicle consisting of Paste.

Backside silver paste silverpasteforbacksurface which satisfies screen printed electrodes for crystalline silicon solar cells on the back of the silver powder, glass powder, additives and organic vehicle consisting of Paste.

Aluminum paste Screen printing which satisfies crystalline silicon solar cells used by the aluminum back electrode, glass powder, additives and organic vehicle consisting of (back Field electrode) paste.

4.1 Categories

4.1.1

Usage by product slurry into crystalline silicon solar cell with the front electrode silver paste, back electrode silver paste and aluminum paste electrode back field.