

Press Release

Making SIP manufacturing defects a thing of the past: Heraeus Electronics unveils world's first spatter-free Type 7 solder paste

New Water Soluble Ultra Fine Pitch Solder Paste significantly reduces defects for system-in-package manufacturers

WEST CONSHOHOCKEN, Pennsylvania- June 29, 2018- Heraeus Electronics, a leading provider of materials solutions for the semiconductor and electronic packaging industries, announced the introduction of the industry's first spatter-free type 7 (2~11um) solder paste for fine pitch applications. This high-performing paste enables manufacturers to greatly reduce defects such as solder balling and solder beading. The paste will be featured at the Semicon West 2018 conference and exhibition, taking place July 10 to July 12 at the Moscone Center in San Francisco.

The type 6 (5~15um) version of this paste, which was introduced to the advanced packaging market in 2017, is now in high volume production and very successful for wireless and Bluetooth applications. The new type 7 version in the Heraeus WS5112 series provides superior performance to meet the demanding technical requirements of semiconductor packaging manufacturers, wafer bumping manufacturers and fabless design houses. Its ability to deliver splash-free/splatter-free performance is the result of two innovations: the company's Welco™ solder powder and flux platform.

Welco™ is a proprietary method of producing perfectly round-shaped solder powder with very low oxide content. It is an in-process control method of solder powder manufacturing where no sieving is required to meet the powder size ranges as defined by IPC standards. Powders are fully protected from exposure to air or oxygen at elevated temperature, oxides formation on the surface of the powder is kept to a minimum.

The unique WS5112 flux platform was developed in-house at Heraeus Advanced Packaging product development facilities in Singapore. The innovative formulation of the flux results in highly consistency solder volume over printing life. With system-in-package applications, solder beads defects are often found on wire bonding pads and under passive components and flip-chips. Using carefully selected polymers, WS5112 has no or minimal solder splashing/splattering during the reflow process. Customer feedback indicates that solder beads formation was greatly reduced when using WS5112 solder paste.

Li-san Chan, Assembly Materials Advanced Packaging Global Product Manager for Heraeus Electronics, said, "As back-end manufacturing continues to move toward miniaturization, solder materials have to perform flawlessly. Our Type 7 WS5112 solder paste eliminates the costly production line delays and package defects caused by spatter-prone, under-performing solder pastes."

Heraeus Electronics will be exhibiting at Semicon West 2018 in San Francisco, July 10-12, booth 2005.

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About Heraeus

A globally leading technology group, Heraeus is headquartered in Hanau, Germany. Founded in 1851, it is a family-owned portfolio company which traces its roots back to a pharmacy opened by the family in 1660. Today, Heraeus combines businesses in the environmental, energy, electronics, health, mobility and industrial applications sectors.

In the 2017 financial year, Heraeus generated revenues of €21.8 billion. With approximately 13.000 employees in 40 countries, the FORTUNE Global 500-listed company holds a leading position in its global markets. Heraeus is one of the top 10 family-owned companies in Germany. With technical expertise, a commitment to excellence, a focus on innovation and entrepreneurial leadership, we are constantly striving to improve our performance. We create high-quality solutions for our clients and strengthen their long-term competitiveness by combining unique material expertise with leadership in technology.

About Heraeus Electronics

Heraeus Electronics - a Global Business Unit of the Heraeus Group - is one of the leading manufacturers of materials for the packaging of integrated circuits in the electronics industry. The company deals with sophisticated material solutions for semiconductor and automotive industry, consumer goods, energy, industry electronics as well as communications and telecommunications. Core competences include bonding wires, assembly materials, thick film pastes, as well as roll clad strips and substrates. For more information, please visit www.heraeus-electronics.com.

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