



FERRO CORPORATION 1000 Lakeside Avenue Cleveland, OH 44114-1147 USA Phone: 216/641-8580

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**NEWS RELEASE**

**FOR IMMEDIATE RELEASE**

## **New Contact Pastes from Ferro Electronic Materials for High-Efficiency Solar Cells**

### **Pastes optimized for new silicon cell architectures**

**CLEVELAND, OH—10 September 2010**—Ferro Electronic Materials, a leading supplier of materials for fabricating photovoltaic silicon solar cells for more than 25 years, introduced a new series of silver and silver/aluminum contact pastes at the 25th European Photovoltaic Solar Energy Conference and Exhibition held in Valencia, Spain, September 6–9. The PS 33-650 series—the result of more than five year’s research—is new-generation technology that provides contacts for new high-efficiency silicon cell designs such as n-type, bi-facial, and interdigitated back contact solar cells.

Ferro's PS 33-650 series conductor pastes enhance electrical efficiency through their low contact resistance, optimum bulk resistance, and excellent line resolution and aspect ratio. These materials are suitable for various cell designs based on n-type or p-type wafers, and have excellent solderability and adhesion when used with leaded or lead-free solders. The cadmium- and phthalate-free pastes are RoHS-compliant and are completely compatible with lead-free aluminum inks used for emitter formation in some n-type silicon configurations.

"It is challenging to produce low contact resistance to the passivated p-surface while maintaining low leakage current across the junction," said Aziz Shaikh, Ferro director of photovoltaic R&D. "These new p-surface contact materials provide low contact resistance to passivated boron-doped emitters while maintaining good diode quality resulting in up to 20 percent efficiency from n-type mono-wafers in laboratory tests."

Ferro also supplies low firing temperature LF 33-700 series silver conductors and LF 33-750 polymer silver conductors that are compatible with aluminum-based emitter structures.

#### **About Ferro Corporation**

Ferro Corporation ([www.ferro.com](http://www.ferro.com)) is a leading global supplier of technology-based performance materials for manufacturers. Ferro materials enhance the performance of products in a variety of end markets, including electronics, solar energy, telecommunications, pharmaceuticals, building and renovation, appliances, automotive, household furnishings, and industrial products. Headquartered in Cleveland, Ohio, the Company has approximately 5,200 employees globally and reported 2009 sales of \$1.7 billion.

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#### **MEDIA CONTACTS:**

Mary Abood  
Director, Corporate Communications, Ferro Corporation  
Phone: 216-875-6202  
E-mail: [aboodm@ferro.com](mailto:aboodm@ferro.com)

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**INVESTOR CONTACT:**

David Longfellow

Director, Investor Relations, Ferro Corporation

Phone: 216-875-7155

E-mail: [longfellowd@ferro.com](mailto:longfellowd@ferro.com)