

## Dow Unveils ENLIGHT™ Polyolefin Encapsulant Films for Photovoltaic Modules, Ramps Up Commercial-Scale Manufacturing from New Production Facility

The Dow Chemical Company

The Dow Chemical Company (Dow) is introducing [ENLIGHT™ Polyolefin Encapsulant Films](#) [1], which can enhance efficiencies in photovoltaic (PV) module production and lead to lower conversion costs. The films also can provide greater module stability and improved electrical performance versus traditional encapsulants, such as EVA-based products, which improves the reliability and extends the service life of PV modules. The new encapsulant films are suitable for C-Si and thin-film modules.

The new encapsulant films are the latest solutions spurred by Dow's focus on delivering sustainable solutions to address some of the world's most critical challenges – including the need for clean energy.

“ENLIGHT Polyolefin Encapsulant Films provide a number of benefits that help lower the total system costs of producing and using modules,” said Brij Sinha, global business development leader for Dow's Specialty Packaging & Films business. “Customers have found the films reduce cycle times up to 30 percent and that the lamination temperature windows can be extended. The physical properties virtually eliminate bubbles, which leads to fewer rejects. Damage to equipment and modules is also markedly reduced because the process does not produce acetic acid.”

Based on fully integrated polyolefin technology, these encapsulant films:

- Can be formulated to address specific module design needs;
- Provide Water Vapor Transmission Rates (WVTR) that can range from 10-20 times higher than EVA materials;
- Allow excellent adhesion to glass under various lamination conditions;
- Show no creep in use;
- Offer a better matched refractive index to glass compared to EVA; and
- Are listed with Underwriters Laboratories (UL) as “Recognized Components.”

Modules made with ENLIGHT Polyolefin Encapsulant Films can retain efficiency levels after more than 10,000 hours of damp heat exposure, whereas Dow testing shows that modules made with EVA typically show a sharp drop off in efficiency levels after more than 2,000 hours in damp heat.<sup>1</sup>

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The specialty films will initially be produced at Dow's manufacturing plant in Findlay, Ohio, where a state-of-the-art production line was added to address the growing demand for specialty films for use in PV modules. Commercial-scale manufacturing of ENLIGHT Polyolefin Encapsulant Films will begin on that line in the fourth quarter of 2010. Dow is pursuing a phase-in plan to upgrade production and increase capacity across the globe to address increasing demand for these differentiated encapsulants.

“Dow continues to bring high-performance products to the solar energy market, and has made a multi-million dollar investment in photovoltaic encapsulants. We are constantly innovating to help customers improve conversion efficiencies and extend the reliability and longevity of both rigid and flexible photovoltaic modules,” Sinha said.

This latest encapsulant joins the ENLIGHT family of encapsulants, metallization, imaging, cleaning and texturizing materials sold to the photovoltaic market worldwide. Dow is developing a wide range of technologies to address the needs of PV module manufacturers, including films, resins, adhesives, and electronic materials. These include ADCOTE Solvent-Based Adhesives, MOR-FREE Solventless Adhesives and ENLIGHT Liquid Encapsulants for flexible modules. Dow will showcase its entire line of products for PV manufacturers at this year's [25th European Photovoltaic Solar Energy Conference and Exhibition](#) [2] (PVSEC) in Valencia, Spain (stand L3/H4/B4, Hall 4, Feria Valencia).

For additional information about ENLIGHT Polyolefin Encapsulant Films, please visit the [ENLIGHT Web site](#) [1] or call the Customer Information Group and reference Element# 1-89SVTV:

- In North America: 800-441-4369
- In Europe: + 800 3 694 6367; or in Italy: 800 783 825

## About Dow

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## Links:

[1] <http://www.dow.com/packaging/products/enlight.htm>

[2] <http://www.photovoltaic-conference.com/>

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