

Material Partners

Fabrico relies on engineering expertise and sourcing power to fully support customers' design engineers, helping them to select the best material for the intended use. All critical material properties are considered in any Fabrico project, including chemical, thermal, and moisture resistance. With more than 30 years of converting experience, Fabrico engineers also understand the effect of a material selection on the overall manufacturing process, and design material systems that optimize production efficiency and improve cost-effectiveness.

Fabrico converts a wide variety of substrates, including films, papers, foils, tapes, foams, and other flexible materials from such world-class suppliers as 3M, DuPont, Saint-Gobain, and Adhesives Research. Long standing relationships with world-class material manufacturers such as these aid in understanding material characteristics and position Fabrico for rapid material sourcing.



Flexible Materials for Solar Energy



Fabrico Headquarters in Kennesaw, Georgia, USA

About Fabrico

Fabrico is the market leader in the engineered conversion of flexible materials. By focusing on customers' needs, Fabrico has developed a track record of solving unique challenges and providing sound customer solutions.



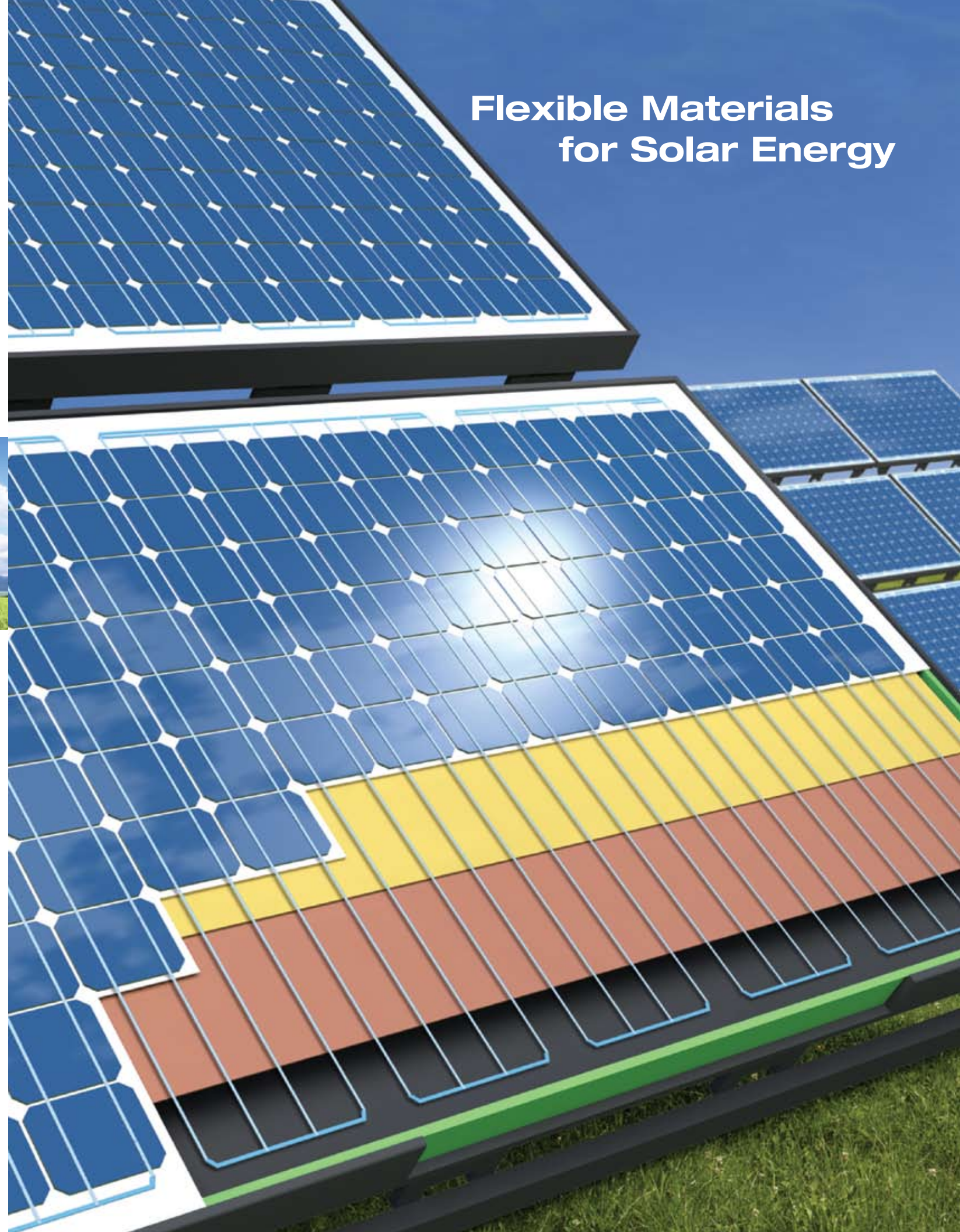
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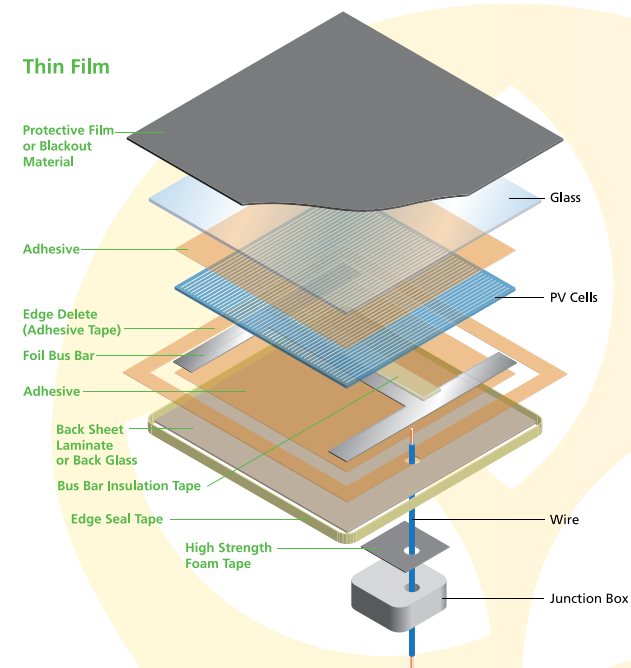
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Flexible Materials for Solar Energy

There's a side of solar energy that few people see—the underside. That's where multiple layers of film, conductive foil, and sealing and insulation material combine with solar technology to convert the sun's rays into useable heat and power. It's also where product innovation and engineering skill can reap huge rewards for manufacturers who are trying to improve product performance while managing material and manufacturing cost.

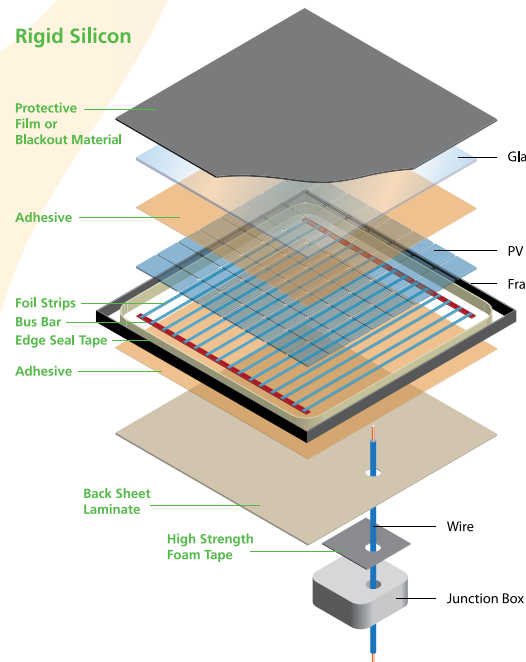


Thin Film

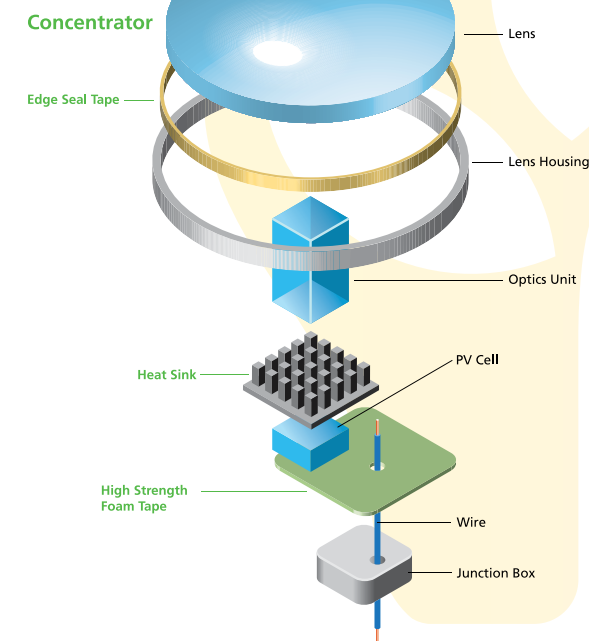
Fabrico provides a variety of flexible materials for thin film applications. Finished products include bus bar and bus bar materials, protective film or blackout materials, adhesives, edge seal materials, and 3M™ VHB™ foam tapes. In fact, Fabrico is highly respected for its understanding of bus bar applications and, as a result, converts more foil tape into bus bar than any other converter. Fabrico is also the leading supplier of blackout materials, which protect outer layers of solar panels from scratches, debris, and dirt, and keep the panel dormant until installed in the field.

Rigid Silicon

Fabrico offers custom converting services for rigid silicon applications that include slitting, laminating, die-cutting, and printing. Finished products include bus bar and bus bar materials, protective film or blackout materials, adhesives, edge seal materials, 3M™ VHB™ foam tapes, and electrical insulation tapes. For bus bar applications, Fabrico offers a variety of unique processes, including proprietary slitting techniques that yield sliver-free tapes in some of the narrowest widths available in the market.



Rigid Silicon



Concentrator

Fabrico custom converts for numerous evolving solar strategies such as concentrator technology. Fabrico utilizes state-of-the-art machinery to custom convert materials such as 3M™ VHB™ tape to exact dimensions for edge sealing, thermal insulating materials, and thermal transfer materials for heat sinks between the optics unit and the solar cell. Fabrico has also developed unique conversion methods for high-strength foam tapes that are used to adhere the electronics package to concentrator structures.

High-Strength Acrylic Foam Tape Enhances Panel Efficiency

SITUATION

In the areas of edge sealing, frame bonding, and junction box mounting, solar companies in rigid and thin film solar panel technologies have used both silicone adhesives and polyethylene (PE) and polyurethane foam tapes to replace metal fastening options. Silicone adhesives require an investment in dispensing technologies, as well as manufacturing and testing delays due to curing time. PE and polyurethane foam tapes can fail due to expansion, contraction, and temperature changes.

SOLUTION

High-strength acrylic foam tape looks and feels like foam. The tape has a viscoelastic property that allows for expansion/contraction without losing its original shape. Acrylic tapes offer excellent durability as well as solvent and moisture resistance. Relative shear strength is very high and the tape can be die-cut in limitless shapes and sizes. Acrylic foam tape seals against moisture, dust, and air, and it bonds well with polycarbonates, PPE, and other thermoplastics.

RESULTS

Elimination of curing time allows manufacturers to keep the production line moving. The tape is easy to apply, and labor costs are reduced. Acrylic foam tape provides a cost effective solution that is also “greener” than solvent-based adhesives.

