



Progress beyond

Solvay and 3TREES collaborate to extend the lifetime of BIPV roofing materials

Solvay's stabilization technology enables 3TREES to meet 25-year material anti-aging requirements, a critical element in advancing BIPV technology and market growth

Princeton, September 27, 2022

Solvay announced today a collaboration with 3TREES, a leading Chinese building materials manufacturer, to develop building-integrated photovoltaic (BIPV) thermoplastic polyolefin roofing membranes that comply with new 25-year weathering requirements. The project will support China's goal to achieve carbon neutrality by 2060 by accelerating the adoption of distributed rooftop BIPV installations. The demand for BIPV products continues to rise globally, driven by construction projects, new material options and growing consumer preference for sustainable solutions.

In China, using BIPVs to replace conventional thermoplastic polyolefin (TPO) building materials for applications such as roofs, skylights and facades is an emerging trend. Aging requirements for BIPV TPO roofing far exceed the 10-year requirement for standard TPO roofing, a critical factor in offsetting the cost of such installations. However, current TPO solutions in China are unable to meet this specification.

Solvay's CYASORB CYNERGY SOLUTIONS® B Series UV/thermal stabilizer will enable compliance with the 25-year weathering requirement for BIPV TPO roofing in China, providing excellent protection to TPO and PP parts, even in extreme exposure environments. CYASORB CYNERGY SOLUTIONS® B Series stabilizers prevent micro-crack formation, loss of gloss and color shift, and do not interfere with sealing, painting and other surface treatments. While Solvay's additives can be incorporated in the TPO membrane, they can also be used in photovoltaic panels and support systems, where they provide excellent UV protection for backsheet films and heat stability combined with good chemical resistance.

"Solvay is excited to work with 3TREES to introduce a new BIPV TPO roofing product to the Chinese market," commented Ning Chen, Vice President for Solvay's Polymer Additives business. "Enabled by Solvay's solutions, 3TREES' new BIPV TPO roofing membrane will address the limitations of existing products. We look forward to supporting 3TREES in driving the building and construction industry's shift to BIPV solutions and working toward China's carbon neutrality goals."

Initial testing by 3TREES demonstrated that Solvay's product provides superior stabilization performance. The goal of the collaboration is to work toward the commercialization and scale-up of



this solution. The collaboration agreement will cover product testing, qualification, market promotion, new project development and production. Solvay's CYASORB CYNERGY SOLUTIONS® B Series stabilizer will be incorporated into 3TREES' TPO roofing sheets, allowing the company to far exceed ASTM D6878 and ASTM D573 standards. The stabilizer is also designed to address China-specific standards under evaluation, such as "Technical Regulations for Roofing Engineering of Photovoltaic Modules" and "Technical Specifications for Roofing Engineering." Solvay has more than a decade of experience in the stabilization of building polymers, supporting leading builders and OEMs in the United States.

"We've been impressed by Solvay's quick action, technical support and stabilization solution," said Huang Lulu, Research & Innovation Director at 3TREES. "Their CYASORB CYNERGY SOLUTIONS® B Series stabilizers provide excellent thermal aging performance, show no obvious discoloration, and enable TPO BIPV parts to maintain their physical properties. We're excited to accelerate the development of the BIPV market in China."

Visit Solvay's booth at [K 2022](#) (Hall 6 / C61) to learn more about our BIPV solutions, or visit www.solvay.com.

CYASORB CYNERGY SOLUTIONS® is a registered trademark of Solvay.



3TREES' BIPV solution incorporating Solvay's UV/thermal stabilizers. (Photo: Solvay, PR044)



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About Solvay

Solvay is a science company whose technologies bring benefits to many aspects of daily life. With more than 21,000 employees in 63 countries, Solvay bonds people, ideas and elements to reinvent progress. The Group seeks to create sustainable shared value for all, notably through its Solvay One Planet roadmap crafted around three pillars: protecting the climate, preserving resources and fostering a better life. The Group's innovative solutions contribute to safer, cleaner, and more sustainable products found in homes, food and consumer goods, planes, cars, batteries, smart devices, health care applications, water and air purification systems. Founded in 1863, Solvay today ranks among the world's top three companies for the vast majority of its activities and delivered net sales of €10.1 billion in 2021. Solvay is listed on Euronext Brussels and Paris (SOLB). Learn more at www.solvay.com.

About 3TREES

Founded in 2002, 3TREES (SKSHU Paint Co., Ltd.) is committed to creating a better life and a healthier living environment for humanity by providing an integrated one-stop-shop for green construction materials and services. The company's portfolio encompasses Interior & Exterior Wall Coatings, Waterproofing Products, Insulation Materials, Industrial Coatings, Floor Coatings, Home Decoration Materials, Auxiliary Materials and Construction. 3TREES is one of the leading roofing manufacturers in China with an expanding portfolio for TPO roofing.



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