



About backsheet, Coveme answered to reporter's request

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Mr. Fabio Menicanti, general manager of global PV department of Coveme said, from the third quarter, the capacity of Coveme will get almost 8,000,000 m².

In the first quarter of 2015, Coveme provided a kind of special backsheet to avoid the snail trail.

(News from PV-tech) From the first quarter of 2015, Coveme provided a special backsheet specific to the PV modules to avoid the snail trails, samples of Coveme backsheet with above mentioned special primer were then submitted to the maximum authority for snail trail studies, the Fraunhofer Center for Silicon Photovoltaics CSP in Germany.

In recent years the defect known in the PV sector as "snail trails" or "snail traces" has been one of the most troublesome issues for most PV module producers.

"Snail trails" usually appear on the PV cells as dark streaks which are the visual result of a brownish color discoloration of the cells grid finger occurring along the cell edges or close to cells micro-cracks.

According to the most valuable theories and experiments, if some moisture manages to reach the cells through these micro-cracks or cell edges the water might trigger a reaction with the silver ions contained in the grid fingers therefore creating some Silver nanoparticles (AgNP) with a typical brownish color.

When these silver nanoparticles get accumulated in the area of the encapsulation foil directly in contact with the grid fingers they then cause the discoloration phenomenon known as "snail trail".

PV-Tech: What's the character about the backsheet provided by Coveme? How to help the PV module avoid the snail trace?

Fabio Menicanti, general manager from global PV department said: even though a direct correlation between backsheet material and snail trails hasn't been proven yet, it is common knowledge that reducing the WVTR (Water Vapor Transmission Rate) of the backsheet could consequently decrease the chances of moisture transmission through cell edges or micro-cracks. That's why Coveme developed a backsheet with a special primer which provides a WVTR of < 2 gr/sqm. Per day(38 C/90% HR with Mocon Permatran) .

Besides that, there might be chances for the encapsulation materials and for the backsheet to facilitate the formation of "snail trails" if these materials contain some organo-metallic compounds with some specific elements like S, Se and Cl. These compounds can lead to the formation of AgNP on the cells surface.

PV- Tech: There are different kinds of backsheet, such as TPT, TPE, PET, which one Coveme looks to further increase the best?

Fabio said that: besides the PET, we produce the TPE as well. We are specialized in PET, so we produce PET and we are very professional in PET. According to the different environment, the customers have different requirements for the backsheets, so in the desert, they need the high UV resistance, in the tropics we need high hydrolytic resistance. If we set up the PV modules on the rooftop, then we don't need the Tedlar, that's because we don't need high UV protection, in order to control the cost, we suggest that, the manufacturer of the PV modules choose the backsheets by environment, TPT is suitable for the environment, and TPE is suitable for the other environments, thus we also produce TPE, because we know that an amount of our customers need TPE, they are now develop the PV station in the desert of Xinjiang. That doesn't mean we don't like the other materials, the most suitable is the best.

PV-Tech: What about the capacity for 2015, when the capacity will be fully released?

Fabio Menicanti: the sales volume of 2014 is more than 30 million m^2 , and we became the 3rd biggest backsheets producer. Coveme has set the factory in Zhangjiagang, the capacity is more than 2 million m^2 , it is predicted that after put into production in June about the new production line, we will double the monthly output, plus the 3 million m^2 monthly output from Italy, from the third quarter of 2015, the global capacity of Coveme will almost achieve 800 million m^2 .

PV-Tech: About the new product, what's Coveme's direction?

Fabio Menicanti: Coveme is now researching and developing 2 new products, each one has its own function. One is the super PET backsheets, it has high stability of the water resistance, can long last in DHT more than 3000 hours.

PV-Tech: With the setting up of more and more PV stations, the later maintenance and the recycle will be on the agenda, what's Coveme's solution about this problem?

Fabio Menicanti: What cause the recycle problems are the fluorine backsheets. Most of the backsheets producers in the Chinese market produce the fluorine backsheets, because the fluorine is much more stable, can protect the backsheets from UV, make sure the PV modules can be used outside to avoid crazing, discoloration, delaminating. But with more and more PV stations set up, we are now facing up to the later maintenance and recycle, the fluorine backsheets shows its disadvantage. The fluorine backsheets has halogen element, after incineration, such toxic as hydrogen fluorine will come out, even use the other methods, it's still very difficult to solve the fluorine problem. Till now, there's no efficient solution for recycle plan and technical. Besides, the chemical construction for the fluorocarbon is very stable and firm, usually it won't be degraded after 1000 years burial. If according to the situation like this, the problem caused by the fluorine backsheets will be more and more serious.

All the products produced by Coveme could be degraded, also the waste materials during the production could be degraded. For example, the waste PET during the backsheets production will be recycle by professional company, they will make these materials into other consumable items, such as non-woven fabrics and textile fiber. Coveme use the secondary products created during the production as fuel for the equipment. About the recycle of the backsheets, Coveme use reproducible heat power burning method, almost has no pollution. All the day by day life products such as water bottles, should be recycled and reused.

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