Deliverable Report

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Title:	Encapsulant formulation, 50 kg granulate samples of encapsulant material and film rolls of encapsulant material
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Project acronym:	SuMMiT
Project title:	Smart large lightweight long life Multifunctional PV Module Technology for large Power Installations and Distributed Energy Generation
Project start date:	01/12/2013
Project website:	[www.summit-project.eu]
Technical coordination:	TULiPPS (www.tulipps.com) (NL)
Project management:	TULiPPS / Uniresearch (www.uniresearch.com) (NL)

Executive Summary

Yparex BV has developed a silane grafted PolyOlefinElastomer (POE) specialty material, that is suitable for the production of encapsulant film. Although Yparex is specializied in grafting of all types of polyolefins with maleicanhydride, the company succeeded in the grafting with silanes. This new (silane grafted) raw material can be used for a 3-layer of a monolayer encapsulant. For the 3-layer encapsulant film, Yparex has applied for a patent (Title: 'Electronic Device Module') January 21st 2016: PCT/EP2016/051219.
Unfortunately, there still could not be identified a company who could produce a 3-layer encapsulant film on a commercial scale. Trials at Isovoltaic (AT) were not successful, due to the sticking of the interleave to the encapsulant. Monolayer encapsulant film has been produced at STRE (E) and this film is used to produce several modules for i. tests in the field (TULiPPs, town hall of Waalwijk according SuMMiT deliverable D5.42) and ii. certification testing at KIWA (according SuMMiT Task 4.4, Task 5.6 / Deliverable D5.6). The results of these tests are expected in the near future.
Yparex expects the business potential to be in the double digits compared to its current business volume (in euro's). Commercialisation of the Yparex encapsulant film business has already started and is foreseen to grow fast. Diversification of the Yparex encapsulant portfolio will be part of the further commercialization. Yparex will continue to cooperate with partners. The SuMMiT-project was very important to achieve all development and performance goals not only for the POE long-life encapsulant development, but for silane grafting in general. The commercial introduction of the new POE encapsulant is executed at several European PV modules producers such as SI-Module (Germany) and Solitek (Lithuania). The commercial future of the silane grafted POE is very promising and therefore very important for the future of Yparex BV.

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http://cordis.europa.eu/fp7/cooperation/home_en.html

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FTG | Femtogrid Energy Solutions B.V. (NL)
Fh-ICT | Frauhnhofer-gesellschaft zur foerderung der angewandten forschung E.V. (DLD)
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