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Dated	24 01 2023
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Client: Address:	Portugal
Official in charge:	César Martins
Sample Description:	Paint Removal Agent – PRA – for solar modules
Receipt Date of Sample:	14/12/2022
Order Date:	09/01/2023
Date of Testing:	From 09/01/2023- 20/01/2023
Test description:	Solar panel was tested before and after apply PRA solution by 1-hour-immersing
Sample submitted:	The samples were submitted by the client.

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KERMI department

ÉMI-TÜV SÜD Kft.
KERMI Osztály

Varjú András
PS Business Unit Manager

Magasházy György
Expert

Galisz Zsófia
Expert

Note: The results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the laboratory.

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Solar panels submitted: Offgridtec Polycrystalline solar panel, Model No.:3.01.001555 5W

- **Visual inspection with light microscope**: the solar panels should visually inspected for surfaces changes before and after subjecting to 1-hour immersing in PRA solution
- **Light transmission**: between 290-700 nm wavelength (measured with a UV/VIS spectrophotometer) before and after apply PRA solution by immersing.

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Product:

Paint Removal Agent (PRA)

Evaluation:

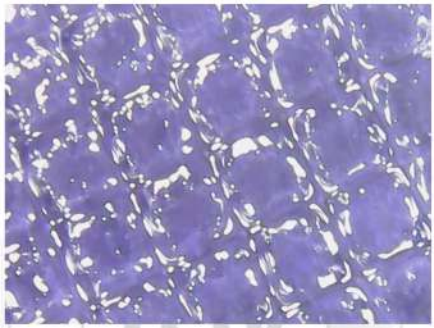
Sample name	Purpose of Examination	Conclusion
PRA-coated solar panel	Visual inspection	Pass
	Light transmission	Pass

The application of PRA solution did not affect the surfaces of the materials (metal, glass and plastic) visually, and the panel maintains a similar light transmission value after the PRA solution 1-hour-immersing procedure.

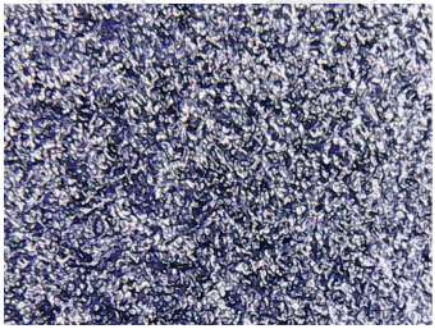
Test Results

1. **Visual inspection with light microscope - before**

Glass



Plastic



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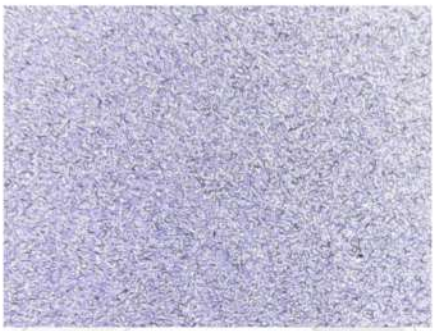
Metal



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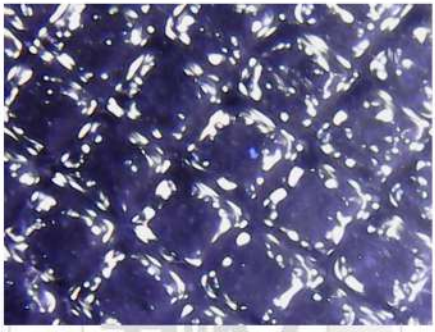
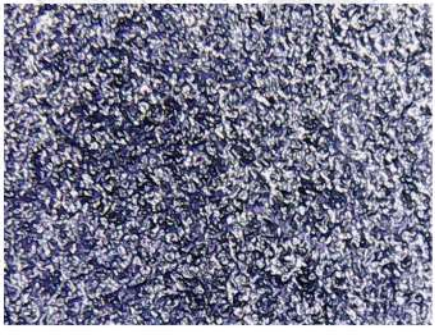
1. **Visual inspection with light microscope - after**

Glass



Plastic



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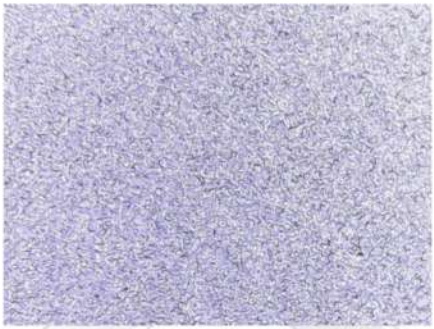
Metal



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2. Light Transmission

Test method: UV/VIS spectrophotometer

The light transmission of the solar panels was measured before immersing the panel in PRA solution. The panels were placed in the direction of light and light transmission between 290-700 nm wavelength. The panels were subjected to apply PRA solution by 1-hour-immersing and the light transmission measurement was repeated.
The results showed that after immersing the panel in PRA solution, the light transmission value is similar to the value before immersing.

Test parameters	Test results	Test method
	PRA sample	
Light transmission between 290 and 700 nm wavelengths, before: %	**43,346**	UV-VIS spectrophotometer
Light transmission between 290 and 700 nm wavelengths, after: %	**43,396**	UV-VIS spectrophotometer

3. Conclusion

Based on the results above, we can than conclude that the prolonged use of the Paint Removal Agent (PRA) is safe for solar panels since it won't affect the materials (metal, glass and plastic) of the panel nor its light transmission values.