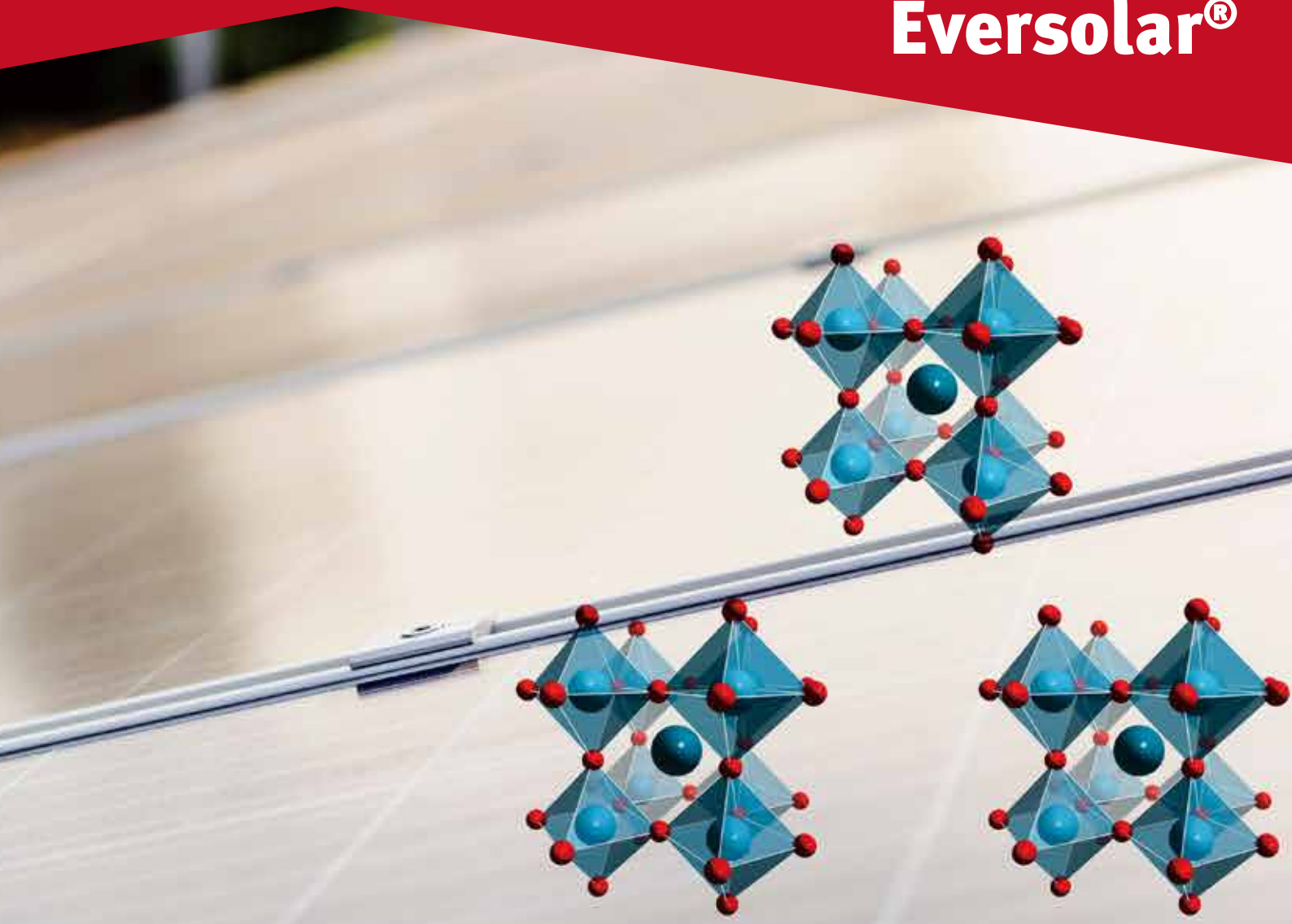
Eversolar®



# Eversolar® Series

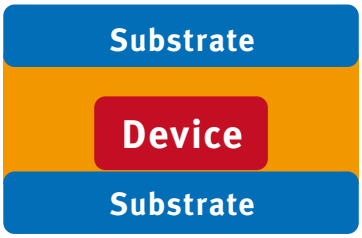
## High Barrier UV-curable Encapsulants for Next-Generation Solar Cells: PSC & OPV

Better Chemistry Better Life

Everlight Chemical

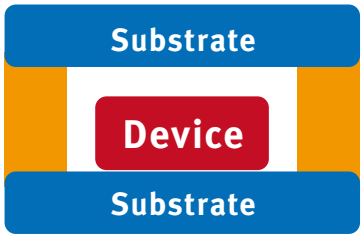
# How to Test & Apply Eversolar® Encapsulants?

## Full Sealing

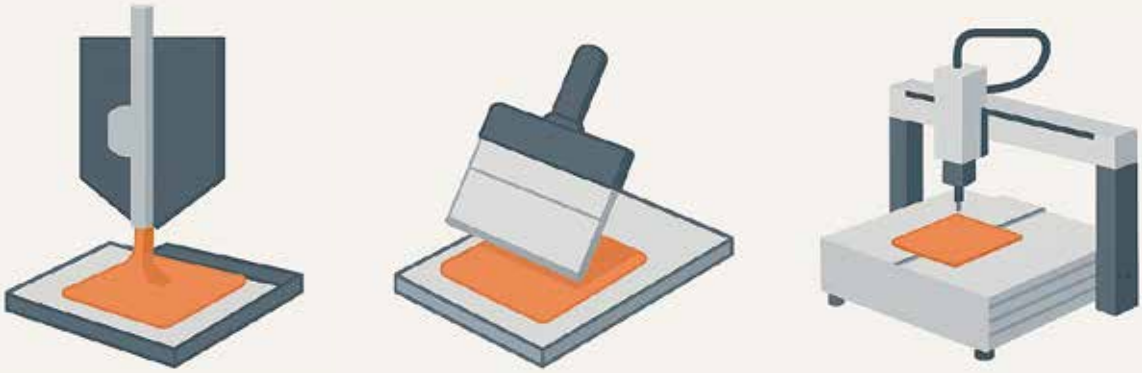



**Eversolar®**
UV-curable Sealants

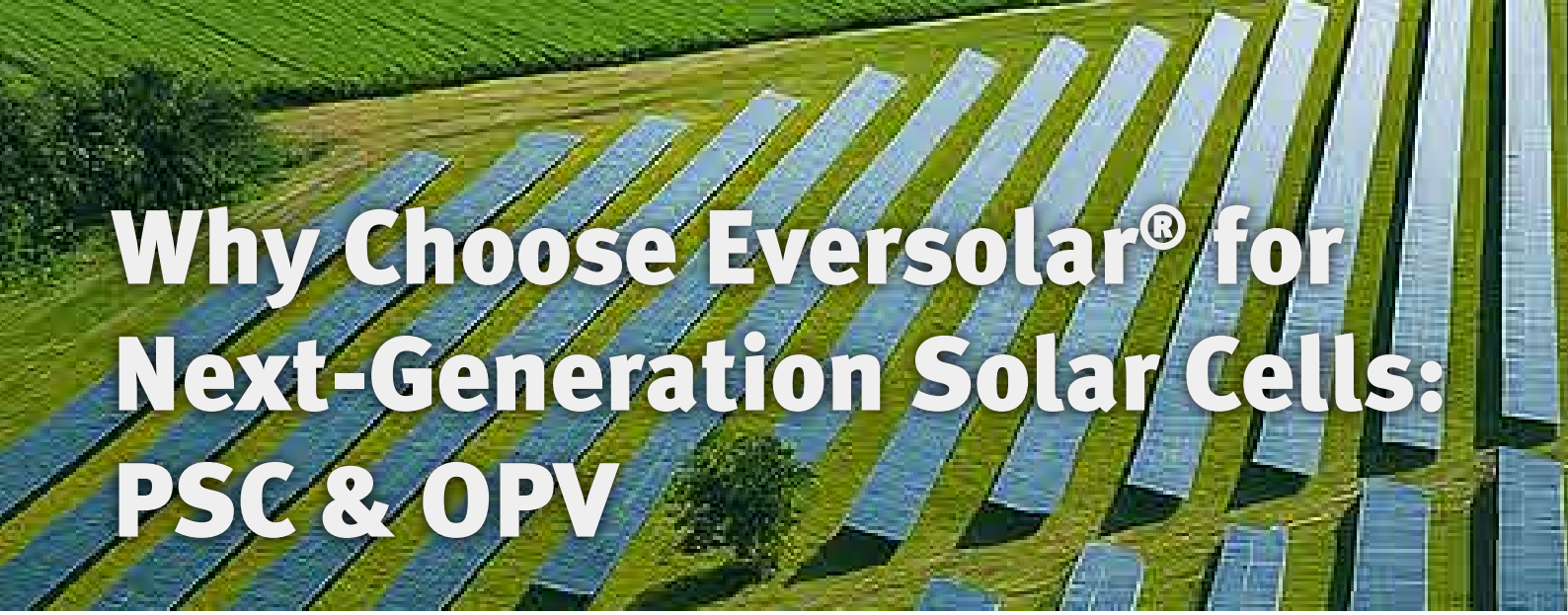
## Frame Sealing




**Coating process: Slot-die, Screen-Printing, Dispensing or similar method.**



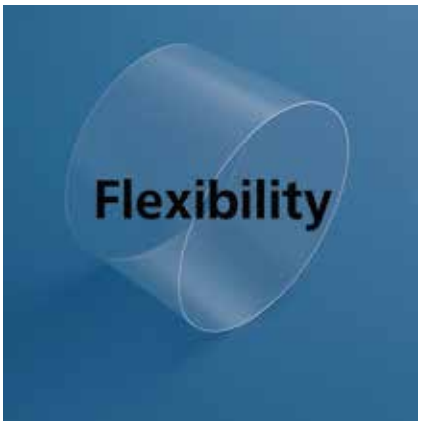
**Interested? Contact us for further discussion, and we will prepare the most suitable sample for your testing. We look forward to collaborating with you.**



# Why Choose Eversolar® for Next-Generation Solar Cells: PSC & OPV

- Chemically Inert
- Flexible & Elastic
- Low WVTR
- Yellowing-resistant
- Strong Multi-surface Adhesion
- Full & Frame Sealing
- Solvent-free, VOC-free

## Features of Eversolar® Encapsulants




Flexible substrates adhesion

Water-vapor blocking for devices

High transmittance in visible light region

## Summary of Eversolar® AB Series Characteristics

| Specification | AB-302 | AB-302c | AB-341 | AB-341k | AB-402 |
|---|---|---|---|---|---|
| **Appearance** | Transparent liquid | | Gray paste | | Clear liquid |
| **Appearance** after curing | Transparent | | Gray opaque | | Transparent |
| **Viscosity (cps) @25°C** | 2,500 ± 500 | 5,000 ± 1,000 | 70,000 ± 10,000 | 155,000 ± 30,000 | 2,200 ± 500 |
| **Tensile strength** (glass/glass) | ≥ 5 MPa | ≥ 3 MPa | | ≥ 4 MPa | ≥ 5 MPa |
| **T-peeling force** (PET/PET) | > 5 N/inch | | > 1.5 N/inch | | - |
| **UV curing condition** (LED 365/405 nm) | 6~9 J/cm$^2$ | | | | |
| **WVTR** (40°C/90%RH) | ≤ 0.8 g·mm/m$^2$·day | | ~ $10^{-2}$ g·mm/m$^2$·day | ~ $10^{-3}$ g·mm/m$^2$·day | ~3 g·mm/m$^2$·day |
| **OTR** (23°C/0%RH) | ~ 240 cc/m$^2$·day | | ~ 180 cc/m$^2$·day | | < 0.5 cc/m$^2$·day |

## Eversolar® Anti-Yellowing Test

### Test Condition

- UVA-340nm / 60°C / 0.86 W/m$^2$/nm
- Test time: 500 hours

※ Standard Specification IEC 61345

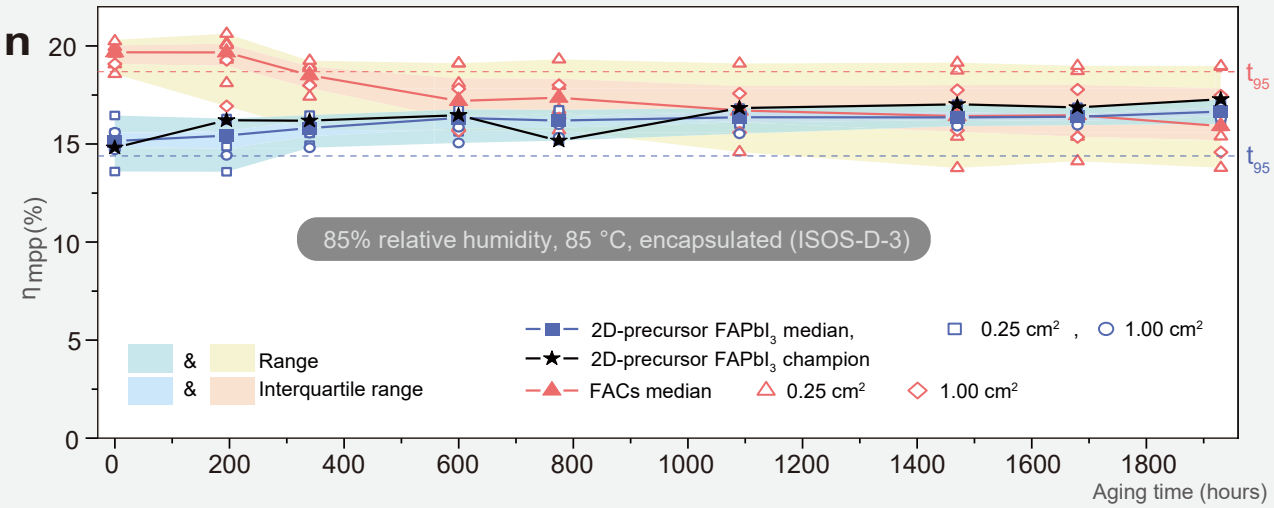
### Test Result

Reference ΔYI +17.4

AB series ΔYI < 5.0

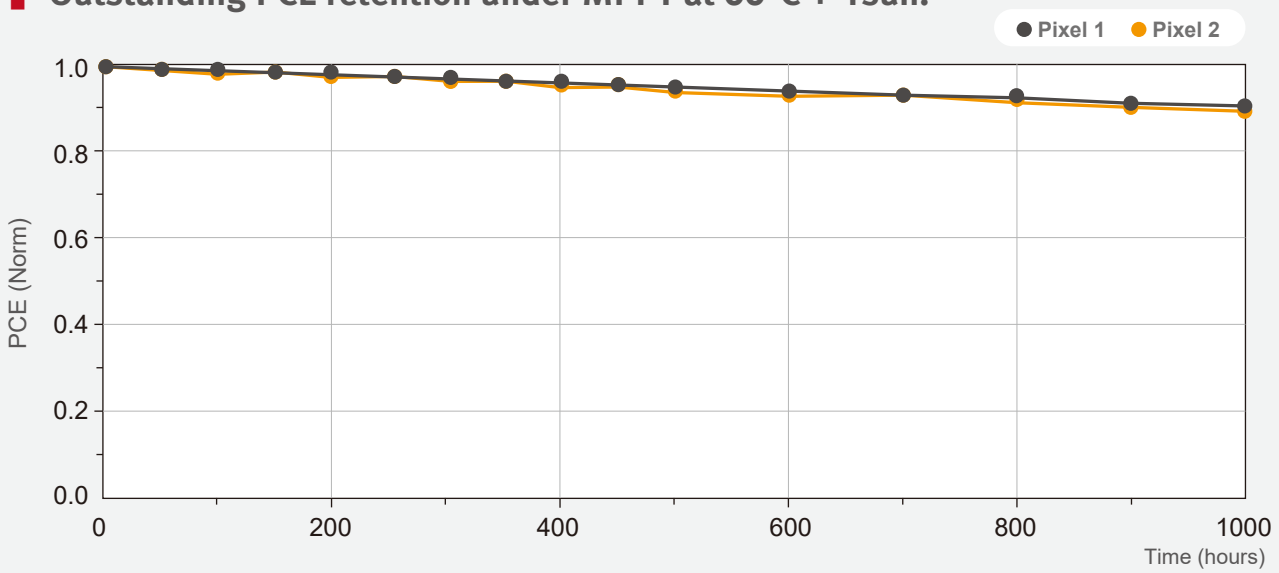
# Eversolar® passes various standard aging tests, enhancing cell reliability.

## Outstanding PCE retention under 85°C / 85% RH damp heat test.




Source: Gallant et al., Nature Communications 2024, 15, 3715. Licensed under CC BY 4.0.
DOI: 10.1038/s41467-024-54113-4

## Outstanding PCE retention under MPPT at 55°C + 1sun.




Source: Gomar-Fernández et al., EES Solar, 2025
DOI: 10.1039/D5EL00145E

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