

2024

COVEME PHOTOVOLTAIC

***BACKSHEET SOLUTIONS
FOR PV MODULES***

coveme

THE VALUE OF INNOVATION

COVEME PHOTOVOLTAIC DIVISION

Coveme develops and manufactures multilayer polymer laminates for solar panels which provide electrical insulation and protect solar cells from humidity and other atmospheric agents. This guarantees the duration and correct functioning of the solar module for up to 30 years.

With an internal production capacity of 20GW and a 25 year long experience in supplying the photovoltaic industry, Coveme is today the most long standing supplier of backsheets and frontsheets for pv modules in the market, and the only one with two production plants and three R&D hubs in Europe and Asia.

The company's dyMat® laminates range offers solutions for all types of pv modules in any installation environment. dyMat® photovoltaic laminates feature a wide choice of PFAS free products, mono and multilayer structures and several output enhancing options.

The use of recyclable materials as well as the offer of recycled polyester film (rPET) as base material are the result of specific research projects in collaboration with suppliers and scientific institutes and complete the range from a sustainable point of view. Coveme also offers a wide range of backsheets with fluorinated materials if required.

Today over 65 GW of solar panels installed worldwide are protected by dyMat® pv backsheets and frontsheets confirming the guaranteed and certified product performance of Coveme's photovoltaic materials. dyMat® products are TÜV RHEINLAND, TÜV SÜD certified and UL registered.

■ **BACKSHEET AND FRONTSHEET SOLUTIONS** for any module type

■ **BONDED WAREHOUSES** in Europe, China, Turkey and Usa

■ **PFAS FREE and LOW CARBON FOOTPRINT** products

■ **20 GW current internal PRODUCTION CAPACITY**

■ **25 YEARS OF EXPERIENCE** in supplying the PV industry

■ **65 GW OF SOLAR PANELS INSTALLED** worldwide protected by dyMat®

SUSTAINABILITY

Coveme is well aware of its responsibility in terms of environment and social wellbeing. This is reflected not only in what we produce but also how we produce, which means a lean and green production technology and strategic partnerships with our customers and suppliers.

SUSTAINABILITY STANDARDS



ISO 14001: 2015 for environmental management



ISO 45001:2018 for health and safety at work



Compliance with Ecomate ESG rating



Compliance with Ecovadis Sustainability rating

SUSTAINABLE PRODUCTS

- 🌿 **PFAS free** and **low carbon footprint** backsheets
- 🌿 Backsheets made of **recycled polyester rPET** component
- 🌿 **LCA** and carbon footprint **analysis of a backsheet** for solar panels
- 🌿 Promotion of a **circular economy project**

ACHIEVED GOALS

- 🌿 In 2023 Coveme group published its first **Sustainability Report**
- 🌿 Implementation of a **Strategic Decarbonization Plan** starting from 2024
- 🌿 Calculation of **Carbon Footprint** based on **GHG protocol** for the Coveme group: **scopes 1,2,3**

SUSTAINABILITY MEASURES

- 🌿 **Self-powering** and **Solvent-free** production lines
- 🌿 **Autothermal** and **regenerative processes in production**
- 🌿 **Recovery and reuse** of packaging, encaps and core
- 🌿 **Packaging disposal instructions** for clients
- 🌿 **Energy production and self-consumption** through installed solar panels
- 🌿 **Differentiation and recycling** of production and office waste
- 🌿 Treatment and **cleaning of harmful fumes and water**
- 🌿 **Reusable and recyclable** exhibitor stands
- 🌿 **Replacement of single-use plastic** materials

HIGH PERFORMANCE PET BASED BACKSHEETS FOR UTILITY AND DISTRIBUTION GENERATION

PET BASED BACKSHEETS FOR UTILITY

Coveme's dyMat® PET based backsheets for 1500V features thicker inner PET layers in order to comply with the new IEC rules for 1500V insulation. They guarantee more than DHT 2500 hrs, PCT(HAST) 72 hrs and more than 400 kWh/ m2 of UV irradiation resistance. Coveme offers mono or multilayer versions for 1500 VDC, backsheets can be supplied in white or black colour.

 **PFAS free, low carbon footprint, recyclable, rPET version**

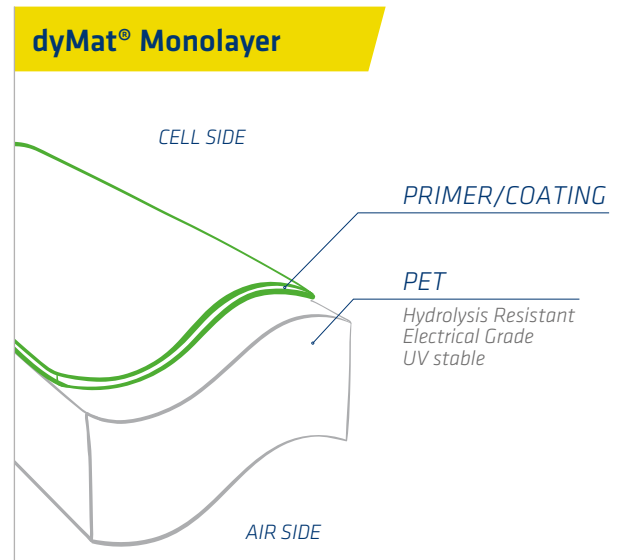
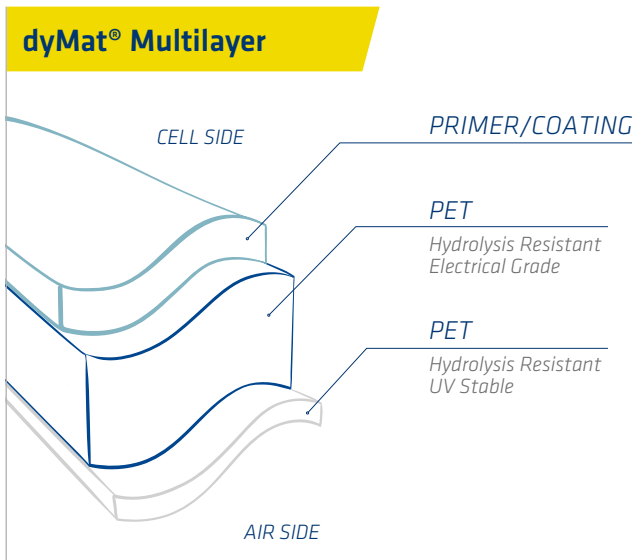
 **Mono or multilayers versions available**

 **20 years field track record**

 **High grade PET, UV and hydrolysis resistant**

 **TOPCon, HJT and PERC cells**

**1500
VDC**



CLEAR PET BASED BACKSHEETS FOR BIFACIAL PV

Coveme's dyMat® transparent high grade PET backsheets are employed as an alternative to glass in Bifacial modules or where transparency is required (eg. greenhouses). The polymers, primer and adhesives specifically developed for these products provide an extra high resistance to UV and humidity. dyMat® Clear PET Backsheets are suitable for 1000 and 1500 VDC and have a proven track record being employed in the world's first bifacial 1500V installation.

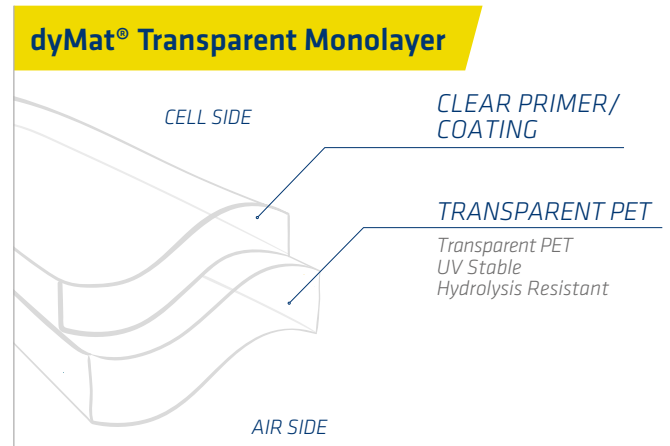
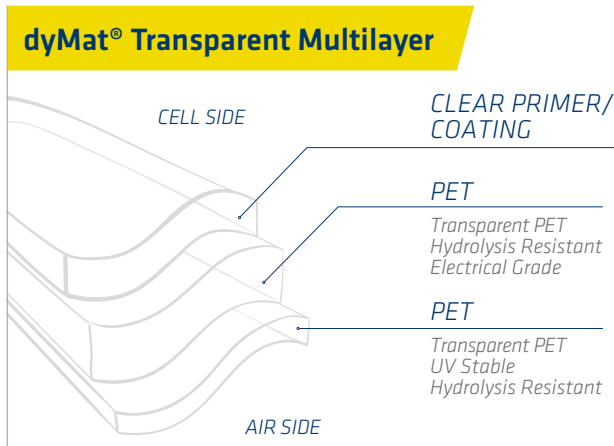
 **PFAS free, low carbon footprint, recyclable, rPET version**

 **3000H DHT WITH <1% POWER DROP***
**tested by Fraunhofer ISE*

**1500
VDC**

 **Black or white mesh grid**

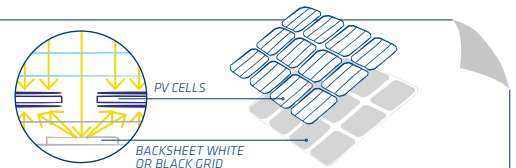
 **TOPCon, HJT and PERC cells**



OUTPUT INCREASING OPTIONS:

dyMat® Selective

Optional white or black grid incorporated in the backsheet that turns the space in between the cells and the borders into a highly reflective area for significant output improvement. The grid layout is defined according to customer's cell shape and size.



BLACK HIGH REFLECTIVITY BACKSHEETS FOR DISTRIBUTED GENERATION

Coverme offers high reflectivity dyMat® black backsheets for 1000/1500 VDC installations for distributed generation (DG), in particular rooftop. The range includes monolayer or multilayers versions with a high reflectivity coating. This feature was studied and developed by Coverme to balance the intrinsic light absorption of black colour.

 PFAS free, low carbon footprint, recyclable, rPET version

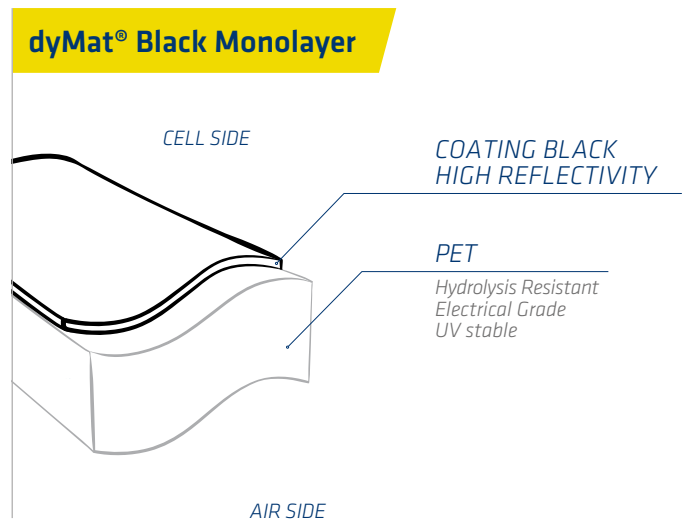
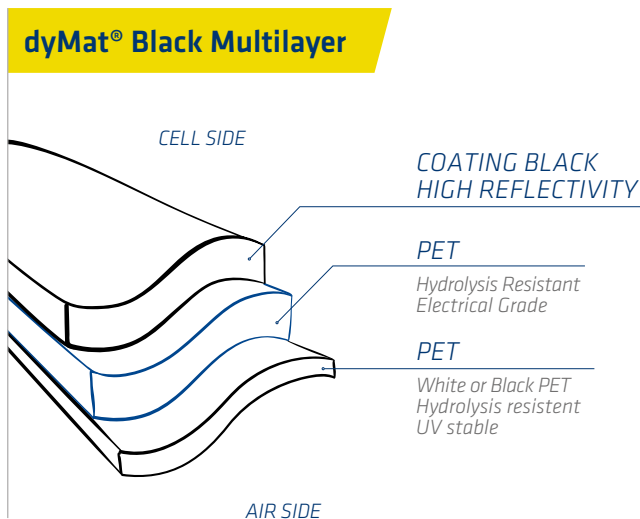
■ Reflectance > 55%

■ High yield with appealing look

■ Black/Black or Black/White version

■ TOPCon, HJT and PERC cells

1000/
1500
VDC



HIGH BARRIER BACKSHEETS FOR DISTRIBUTED GENERATION AND UTILITY

Coverne has developed a range of dyMat® backsheets specifically designed for TOPCon, HJT, thin film (CIGS, a-Si, OPV), flexible PV and c-Si photovoltaic modules installed near water. The barrier layer is available in aluminium or PET. Both versions have a very low WVTR value, in addition the PET barrier is available in a clear version for a completely transparent high barrier backsheet.

 **PFAS free, low carbon footprint, recyclable, rPET version**

 **Extra low WVTR value**

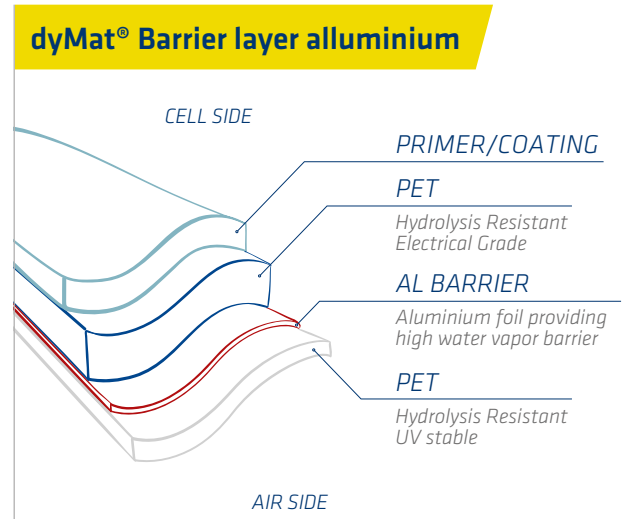
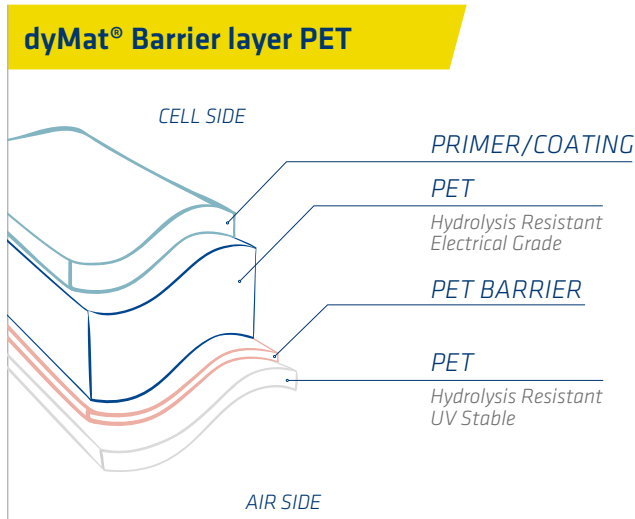
 **TOPCon, HJT, thin film cells**

 **Black and transparent solutions**

 **High reflectivity black coating available**

 **Suitable for floating installation**

**1000/
1500
VDC**



Coveme is certified ISO 9001:2015 for quality management standards, ISO 14001:2015 for environmental management and ISO 45001:2018 for occupational health and safety.

COVEME ITALY CERTIFICATES



ISO 9001:2015



ISO 14001:2015



ISO 45001:2018

COVEME CHINA CERTIFICATES



ISO 9001:2015



ISO 14001:2015



ISO 45001:2018



Coveme is IATF (International Automotive Task Force) certified as suppliers to the automotive industry



Coveme has received the Bronze Medal Ecovadis certification as the result of a corporate sustainability performance evaluation.



Coveme complies with the Ecomate rating which evaluates the environmental, social and governance (ESG) performance of the company

COVEME PHOTOVOLTAIC PRODUCTS ARE UL REGISTERED AND TUV RHEINLAND AND TUV SUD CERTIFIED:



www.coveme.com

COVEME EUROPE

Italy

Coveme S.p.A.

Headquarters:

Via Emilia, 288
40068 - S. Lazzaro di Savena (BO) - Italy
ph. +39 051 6226111

Production Plant and Registered Offices:

Via Gregorcic, 16
34170 - Z.I. S. Andrea - Gorizia - Italy
ph.+39 0481 579911

COVEME ASIA

China

Coveme Engineered Films Zhangjiagang Co., Ltd.

Production Plant and Office:

No. 16, Yuefeng road, Yangshe Town, Zhangjiagang
City, Jiangsu Province, China
P.C. 215600
Ph. +86 512 82559911

COVEME AMERICA

USA

Coveme America INC

Registered Office:

65 N River Lane, Suite 209 Geneva, IL 60134 (USA)
Tel: +1 (630) 578-6671

Operation Office:

1817 N Shawano Street, New London, WI 54961 (USA)
Tel: +1 (847) 867-1272