We understand ecological and social responsibility as the basis for sustainable added value. Following this idea, ecological and social sustainability is anchored in our corporate values.

Our employees are our most important resource. A healthy working environment that lives appreciation and promotes integration and creativity is of the utmost importance to us.

The greatest challenge of the 21st century is the responsible use of resources to create the same opportunities for future generations. As an international, globally positioned company, we face our responsibility.

In consistent pursuit of our sustainability strategy, we are converting the energy consumers of the company to renewable energies. Milestones on this path are the conversion of our mat production from fossil fuels to renewable energy sources and the construction of our new heat supply system at our headquarter in Oschatz.

By implementing these measures, we reduce our CO₂ emissions by more than 1,400t per year. This corresponds to an overall reduction of more than 30%. To produce our CSM, we reduce the CO₂ emissions per kg by more than 50%. By further expanding renewable energy, we aim to reduce the consumption of fossil raw materials to a minimum by 2030.

At Oschatz Glas, we face the challenges of our time and take our responsibility seriously.
### The Future of Chopped Strand Mat

Together with our customers around the world we are continuously developing new customized MAT solutions, suitable for every application. With the investment into our new Mat Line 2.2 we are again raising the technological bar to develop even more applications were Chopped Strand Mat in the past has not been the product of choice.

Our new mat technology enables us to offer:

- the lowest binder contents in the industry,
- the cleanest mat without any dirt, dust, or other contamination
- significantly increased tensile strength at lower basic weights
- maximized roll lengths
- various binders for all potential applications – from hand lamination to highly sophisticated automated impregnation lines

Finally, our new production technology enables us to reduce the CO\(^2\) emissions of our production process by more than 50%. Our new fiberglass mats therefore also make a significant contribution to the sustainability of your product.

Chopped strand mat - the perfect product for your application.

---

**Table: Chopped Strand Mat Specifications**

<table>
<thead>
<tr>
<th>Glass Type</th>
<th>E-glass ... Mat type MA</th>
<th>ECR-glass ... Mat type MR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binder Type</td>
<td>powder bonded</td>
<td>stitched</td>
</tr>
<tr>
<td>Mat Construction</td>
<td>strand titre (default 15 - 30 tex)</td>
<td>strand titre (12 tex and 60 tex in production campaigns)</td>
</tr>
<tr>
<td></td>
<td>chop length (default 50 - 100 mm)</td>
<td>chop length (on request 25 mm)</td>
</tr>
<tr>
<td>Sizing</td>
<td>processing characteristics</td>
<td>mechanical values</td>
</tr>
<tr>
<td>Dimension</td>
<td>square measures (60 bis 900 g/m²)</td>
<td>roll widths (5 - 340 cm)</td>
</tr>
<tr>
<td></td>
<td>roll lengths</td>
<td>custom tailored edge trimming</td>
</tr>
</tbody>
</table>
**Explaination of the Chopped Strand Mat Code**

**MA 111-300-270-S**

<table>
<thead>
<tr>
<th>1st digit</th>
<th>2nd digit</th>
<th>3rd digit</th>
<th>4th digit</th>
<th>5th digit</th>
<th>6th digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>1</td>
<td>1</td>
<td>300</td>
<td>270</td>
<td>S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mat</th>
<th>Type of Mat Binding</th>
<th>Strand Title</th>
<th>Special Features</th>
<th>Area-Related Weights in g/m²</th>
<th>Mat Width in cm</th>
<th>Edge Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P-D Glasseiden GmbH Oschatz - unmatched varieties in fibre glass
### Mat Binder

<table>
<thead>
<tr>
<th>Product</th>
<th>Binder Types</th>
<th>Characteristics / Applications</th>
</tr>
</thead>
</table>
| MA1XX   | Powder bonded Polyester based | • Easily soluble in styrene  
• High fibre bond  
• Applications in continuous processing  
• Mats for automotive industry |
| MA2XX   | Powder bonded Polyester based | • Moderately soluble in styrene  
• Good fibre bond, also in the impregnated state |
| MA3XX   | Powder bonded Polyester based | • Severely soluble in styrene  
• Very good fibre bond  
• For molding applications |
| MA4XX   | Powder bonded Polyester based | • Rapidly soluble in styrene  
• Mats with very high draping capability  
• Very good impregnation  
• Suitable for hand lay-up |
| MA5XX   | Stitched mat (binder-free)    |                                                                                                 |
| MA7XX   | Needled mat (binder-free)     |                                                                                                 |
| MA8XX   | Powder bonded                 | • For applications in thermoplastic reinforcement                                               |
| MA9XX   | Powder bonded Epoxy compatible | • For applications with epoxy resin                                                             |

*There is a separate product information for this mat type.

### Strand Titre

<table>
<thead>
<tr>
<th>Product</th>
<th>Title</th>
<th>Characteristics / Applications</th>
</tr>
</thead>
</table>
| MAX0X   | 12 tex PD LightStrand® | • Very fine  
• For applications with very high surface quality |
| MAX1X   | 15 tex              | • Fine  
• For applications with high surface quality |
| MAX2X   | 20 tex              | • Medium-fine  
• Open structure, moderate impregnation and air release |
| MAX4X   | 30 tex              | • Medium-fine  
• Open structure, fast impregnation and air release  
• Low resin absorption |
| MAX8X   | 60 tex              | • Coarse  
• For mats with high area-related weights  
• Due to the open structure, very rapid impregnation and air release |
| MAX7X   | 10 tex / 30 tex     | • Different strand thicknesses separated on the top and bottom of the mat for excellent surface quality and fast impregnation |
| MAX9X   | 15 tex / 30 tex     | • Different strand thicknesses separated on the top and bottom of the mat for high surface quality and rapid impregnation |
| MAX9X   | 15 tex / 60 tex     | • Different strand thicknesses separated on the top and bottom of the mat for highly filled resins and high surface quality |
Chopped Strand Mats in

Incomparable Diversity
CHOP LENGTH

<table>
<thead>
<tr>
<th>product</th>
<th>chop length</th>
<th>characteristics / applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXX1</td>
<td>50 mm</td>
<td>Standard chop length</td>
</tr>
<tr>
<td>MAXX2</td>
<td>50 mm</td>
<td></td>
</tr>
<tr>
<td>MAXX3</td>
<td>50 mm</td>
<td></td>
</tr>
<tr>
<td>MAXX4</td>
<td>50 mm</td>
<td></td>
</tr>
<tr>
<td>MAXX7</td>
<td>50 mm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product</th>
<th>Chop Length</th>
<th>Characteristics / Applications</th>
</tr>
</thead>
</table>
| MAXX5   | 25 / 50 mm  | Nominal percentage approx. 25% / approx. 75%  
Percentage by weight approx. 20% / approx. 80%  
25 mm - chop length only at the top side of the mat  
For applications with very high surface quality  
High fibre density  
Production in campaigns |
| MAXX8   | 75 / 50 mm  | Nominal percentage approx. 85% / ca. 15%  
Percentage by weight approx. 90% / approx. 10%  
Superior mat strength  
Retention of surface when stretched  
Specially for mats with an area-related weight of > 225 g/m² |
| MAXX9   | 50 / 100 mm | Nominal percentage approx. 90% / approx. 10%  
Percentage by weight approx. 85% / approx. 20%  
Higher mat strength  
Specially for mats with an area-related weight of < 225 g/m² |
| MAXXL   | 150 / 50 mm | Nominal percentage approx. 75% / approx. 25%  
Percentage by weight approx. 85% / approx. 15%  
Superior strength, improved impregnation speed  
Production in campaigns |

SIZING

<table>
<thead>
<tr>
<th>Product</th>
<th>Characteristics / Applications</th>
</tr>
</thead>
</table>
| MAXX1   | Silane-based sizing  
Very good values for UP, vinylester and epoxy resins  
Very good osmotic behaviour  
Resistant to aggressive media  
High weather resistance  
Outstanding wet-out |
| MAXX3   |                                |
| MAXX4   |                                |
| MAXX5   |                                |
| MAXX8   |                                |
| MAXX9   |                                |
| MAXXL   |                                |

<table>
<thead>
<tr>
<th>Product</th>
<th>Characteristics / Applications</th>
</tr>
</thead>
</table>
| MAXX7   | Silane-based sizing  
All raw materials used including the mat binder are approved for the manufacture of container systems in contact with foodstuffs, amongst others for the manufacture of vessels and pipes for drinking water |
**SPECIAL DEVELOPMENTS FOR**

Your requirements are in a constant process of change, just like our chopped strand mats.

To keep abreast with the permanently rising requirements on weight reduction, higher surface quality, less raw material input or higher specific strengths, we permanently develop new types of mats.

With PD LightStrand, you are able to obtain the same level of strength with lower component weight or distinctly higher strengths with the equivalent finished weight.

PD VarioMat supports the direct combination of fibres and textiles, which in the past, had to be combined in several steps in production expending more time and effort.

The mat types MA 941/911 and MA 441/411 are perfectly suitable for the substitution of emulsion mats, showing an improved compatibility with epoxy systems and a substantially reduced resin absorption.

**PARTICULAR APPLICATIONS**

The objective of all these special mats is to provide you with the perfect product for your process.

*scope of applications*
PD VarioMat®

The potential combinations are as large as the possible uses.

With our new unique mat technology we are, for the first time, able to combine different types of textiles with chopped mats without a sewing thread. Whether decorative textile or glass fibres are applied is of no concern.

Hybrid mats @ PD VarioMat®

Even a combination with direct roving, for local reinforcement, is possible at any position. By using glass complexes or glass fabrics an additional directional reinforcement can be achieved.

(* KD...Combination E-glass bonded; M...Chopped strand mat; G...Multiaxial; R...Woven roving; A...Polyester veil; S...Glass veil; D...direct roving)

Especially made for use in the automotive industry, PD VarioMat® can be produced with defined different finished weights.

The chopped strand mat with edge reinforcement is particularly suitable for the production of headliners and sunroofs. Hence in the customer process, additional production steps and mat inserts can be saved.

Possibilities include, for example, 200 g/m² in the selvedge area and 100 g/m² in the mid-area.

Chopped strand mats with reinforced edges @ PD VarioMat®
MAT MA 441

Offering the best properties of your strand powder mat combined with the softer deformability of emulsion mats.

- Reduced mat thickness approx. up to 45% compared to standard mats
- Excellent fibre bond with low binder content
- Remarkably fast fibre glass impregnation
- Outstanding drapability during processing
- Reduced processing times
- Outstanding laminate parameters

MAT MA 941

High-end glass fibre mat for your epoxy resin reinforced GFRP- and flame retardant systems.

- Low mat thickness
- Excellent fibre bond
- Remarkably fast impregnation
- Excellent drapability of the mat during processing
- Excellent processing and compatibility properties with epoxy resin

MA 441/ MA 941 mat is supplied in the following sizes

Area-related weights: 275 - 900 g/m²
Loss on ignition: from 2.5 to 1.5%
Mat width: up to 195 cm

PD LightStrand®

- Higher fibre density with constant finished weight with PD LightStrand® fibres
- up to 50% more fibres per unit of area
- Constant fibre density with reduced finished weight with PD LightStrand® fibres
- up to 40% weight reduction with comparable properties

* Number of chopped glass fibres on an area of 0.1 m² with a split up rate of 85%.
STYLE

Mat width
Depending on the finished weight, rolls of the following sizes are available.

<table>
<thead>
<tr>
<th>Weight (g/m²)</th>
<th>≤ 100</th>
<th>&gt;150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width (cm)</td>
<td>up to 330</td>
<td>up to 340</td>
</tr>
</tbody>
</table>

Edge design
In addition to the standard designs of one side or two edges trimmed, we now also offer untrimmed mats between 125 and 195 cm width. Untrimmed mats are ideal for hand lay-up processes as they permit seamless transitions within a component.

Cuttings
In addition to fabric rolls, for the first time we offer cost-neutral cuttings. Advantage: time saving and waste reduction.

Width: max. 200 cm
Length: max. 350 cm

tube
The mats are generally wound onto cardboard tubes with an internal diameter of 100 mm. The rolls are tightly wound and straight.

roll length
The mat is produced in the desired roll length according to requirements. The roll length depends on the mat product line and the type of packaging. A max. outside diameter of 60 cm and a total roll weight of 300 kg is possible.

<table>
<thead>
<tr>
<th>roll length (m)</th>
<th>area-related weight (g/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>≤ 100</td>
</tr>
<tr>
<td>350</td>
<td>≤ 130</td>
</tr>
<tr>
<td>350</td>
<td>≤ 160</td>
</tr>
<tr>
<td>240</td>
<td>200</td>
</tr>
<tr>
<td>220</td>
<td>225</td>
</tr>
<tr>
<td>170</td>
<td>300</td>
</tr>
<tr>
<td>150</td>
<td>375</td>
</tr>
<tr>
<td>120</td>
<td>450</td>
</tr>
<tr>
<td>100</td>
<td>600</td>
</tr>
<tr>
<td>65</td>
<td>800</td>
</tr>
</tbody>
</table>
PACKAGING

Each individual roll is wrapped in PE-foil. The single roll is packed without carton or in a carton if required. The packaging is always matched to the respective mat product line. Mat tapes with a width of < 80 cm are packed in foil bags with several units to a carton.

Mat with width up to 160 cm
Mat rolls standing on pallet

Mat with width up to 160 cm
Mat with 6 rolls to each pallet
Base size 80 x 120 cm
Lightweight or Europallet

Mat with width up to 160 cm
Mat with 9 or 4 rolls to each pallet
Base size 114 x 114 cm
Type CP3

Mat with width up to 205 cm
Standing on pallet with base size 110 x 110 cm.
The pallet is provided with a wooden frame to secure the mat rolls

Mat with width up to 340 cm
Rolls lying on pallet with wooden frame and base dimensions 113 x 220 / 235 / 255 / 270 / 290 / 310 / 325 / 340 cm
The stack height is adapted to the roll diameter. The packaging is preferentially divided into two units: the base and the stacked pallets. It is possible, however, to furnish the packaging as one unit.

P-D Glasseiden GmbH Oschatz
Wellerswalder Weg 17
04758 Oschatz
Germany

+49 3435 657-0
telefon
+49 3435 622 447
telefax
glasseiden.oschatz@pd-group.com
e-Mail
www.oschatz-glas.com

website