Mecondor – who we are

Mecondor is the world-wide leader in the manufacture of woven and non woven multtube bags (gauntlets) retaining active material for tubular positive plates of industrial lead–acid batteries. With three plants (2 in Italy and 1 in Belgium), Mecondor has been making gauntlets for more than 40 years and has a world market share of over 70%, as priority gauntlets supplier to the major battery industries. A leader in innovation, Mecondor introduced in 2007 the latest generation of non woven gauntlets and, in co-operation with some major customers, has developed new products for Gel, AGM and Stop–Start batteries.

Products

Mecondor is your long-standing partner for all tubular bags and gauntlets. Whether woven or non-woven bags, we are your associate for positive plates. The lead–acid technology is more than ever effective not only because of its low price and perfect recyclability but especially due to its reliability and longevity: up to 20 years in stationary applications. DIN and BS tubular plates (PzS, OPzS, PzV ou OPzV) made with multitubular woven or non-woven gauntlets from Mecondor are your guarantor for this longevity; 1500 cycles and more are not exceptional.

WOVEN Gauntlets

Mecondor woven gauntlets are manufactured from high quality polyester yarn. An impregnation with a synthetic resin allows the plate to withstand the difficult and high oxidative conditions in the battery. During a thermal process the tubes obtain the desired shape, the stiffness and the gauntlet acquires its excellent physical properties.

Even if the cheaper non-woven gauntlet is gaining importance some typical applications still require a woven gauntlet. Woven gauntlets are recommended when the battery has to work under severe conditions, when a high number of cycles and a high compacting pressure is required.

Typical Applications

- Stationary applications
- Gel type batteries
- Special applications like train lighting
- Batteries for the navy (sub–marines)
- Traction under extreme conditions

Different version available, changing type of yarns, threads numbers lengthwise and crosswise. Standard types are AP402 – AP407 – AP410; other on request.
**NON-WOVEN Gauntlets**

Two layers of a 100% polyester non-woven are sewed together. To obtain the required stiffness and resistance against oxidation, this non-woven material is also impregnated with a synthetic resin. The following heating process gives the shape and the stiffness to the non-woven gauntlet.

The very high filtering ability guarantees a low shedding of the active mass. Due to its low electrical resistance combined with a lower cost these gauntlets has become very attractive especially for traction batteries and some stationary applications.

Typical Applications
- Traction (PzS und PzV)
- Stationary (OPzS und OPzV)

**NEWEST GENERATION OF NON WOVEN GAUNTLETS**

MECONDOR, the leading manufacturer of Woven and Non-Woven gauntlets is proud to introduce a new generation of Non-Woven gauntlets.

**NWS – Made with the spunlace technology**

Thanks to its production process, its patented design offers the best features for gauntlets used for positive plates in traction, stand-by and gel batteries. Polyester fibres entangled by thousands of very thin water jets provide a uniform non-woven structure, while impregnation with acrylic resin assures stiffness and oxidation resistance.

Two basic versions are available (Other / more on request):
- NWS2 – standard
- NWS4 – reinforced : increased resin content

The new NWS gauntlets provide:
- Best uniformity, without welding points, resulting in the lowest electrical resistance available on NW gauntlets, hence improved battery capacity (+3 to 5%)
- Extremely even and fine porosity, making it the ideal solution for all filling systems: High filtration capacity facilates wet filling, smooth wall surface for easier (dry) filling with oxide.
- Reduced shedding during battery life.
- Very high homogeneity.
- Excellent uniformity in weight and thickness of the positive plates.
- 100% out of line impregnation for a better control of resin content. Possibility of customised versions
- Excellent acid absorption capacity.

Additional features of the reinforced NWS4 version are:
- Excellent oxidation resistance thanks to its high resin content however maintaining a very low electrical resistance. (important for heavy duty application like mining)
- Unmatched stiffness for a perfect performance during vibrated dry filling.
- Top of the range rigidity for easy handling.

The NWS gauntlet has been introduced more than seven years ago and is now widely used by a great number of battery manufacturer.
All this is possible thanks to the producing process of the NWS spunlace material, with giving the raw material a very high homogeneity and a very uniform pore size as shown on the following picture:

**MAIN TECHNICAL CHARACTERISTICS COMPARISON:**

<table>
<thead>
<tr>
<th></th>
<th>NON-WOVEN NW</th>
<th>NON-WOVEN NWS2</th>
<th>NON-WOVEN NWS4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MATERIAL</strong></td>
<td>standard</td>
<td>Spunlace technology</td>
<td>Spunlace technology</td>
</tr>
<tr>
<td>Fibres</td>
<td>100% polyester</td>
<td>100% polyester</td>
<td>100% polyester</td>
</tr>
<tr>
<td>Surface</td>
<td>point bonded</td>
<td>flat, no welding points</td>
<td>flat, no welding points</td>
</tr>
<tr>
<td><strong>PROPERTIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical resistance typical value</td>
<td>$&lt;0,13 , \Omega \cdot cm^2$</td>
<td>$&lt;0,10 , \Omega \cdot cm^2$</td>
<td>$&lt;0,15 , \Omega \cdot cm^2$</td>
</tr>
<tr>
<td>Stiffness (rigidity) %</td>
<td>100</td>
<td>130</td>
<td>190</td>
</tr>
<tr>
<td>Weight loss after oxidation in H$_2$SO$_4$, d=1,3 $+30g , K_2Cr_2O_7/l$ 7days at 70°C</td>
<td>$&lt;2%$</td>
<td>$&lt;2%$</td>
<td>$&lt;1%$</td>
</tr>
</tbody>
</table>

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**T** – The standard width is 2.5 mm but it can be reduced to 1.8 mm.

**ISM T** – In order to avoid lateral short circuits, the two last half tubes are coated with a hot melt. Like this, the last half tubes are completely sealed.

**O** – No lateral finish

**ISM O** – No lateral finish but the two last half tubes are completely sealed.