

The European Green Deal

#EUGreenDeal

Join the future for washable rental mats

Future of Washable Rental Mats

- Every industry has to look forward
- Energy reduction
 - Longer lifetime
 - More sustainable
 - Circular / recycling
- The EU has set targets for this in the Green Deal.
- Improve products performance.
- Looking at mats there are challenges to be made.
- More important changes have to be made to move forward.

Current facts

- Mats have a nylon, polyester, cotton or polyester/cotton top and rubber backing.
- The rubber backing 60-70% of the mat weight, needs to be strong and flexible to withstand industrial washing and drying.
- The flexible backing makes mats move (walk) over the floor under certain conditions, for example shopping carts.
- Rippled borders are an industry wide problem, the number 1 cause for a low lifetime. (average 4-6 years, used to be 8-10 years in the past) Ripples are a trip hazard and too many rippled mats are placed at customer locations. (reason costs ??)
- Drying mats consumes the most energy, even when using recovered heat. Rubber being 60-70% of the weight absorbs lots of energy. **This is a wasted energy !**



Rippled Mats

Biggest problem to take mats out of service. Trip hazard, reliability claims!
(4-6 years lifetime, used to be 8-10 years)

Current facts


- The current way of washing and drying needs the highest quality rubber to withstand the harsh washing and drying.
- The use of recycled content in rubber is not possible, this brings down quality and lifetime.
- Recycled content can only be used in the textile part. (Econyl Nylon 6)
- Recycled polyester has a too short lifetime, is unable to withstand industrial wash/dry.
- Rubber contains virgin carbon black (made by burning oil) Zinc oxide, **not eco friendly**.
- Most current mat manufacturers use a 100% polyester non woven primary backing for tufting yarn on. When yarn and rubber can be separated for recycling (under testing) this (high polyester content) prevents the depolymerization / reuse of nylon to make new nylon for mats (econyl)

Solution we can offer

- Increase lifetime of the mat, reduce / delay ripples by modification of rubber formula. Extreme wash trial available to proof this, backed by scientific reports.
- Use zinc oxide, nitrosamine, phthalate free rubber (more eco friendly)
- Use a non woven (colbond) having less polyester content to enable future recycling, also helps a bit in reducing ripples
- Use bio based plasticizer (2023 more eco friendly)
- Although more expensive, the improved lifetime makes the mats cheaper when looked at the total (longer) mats lifetime.
- We can work together with your existing manufacturer on all of the above.

Sustainability comes at a cost... **a lower cost.**

Why wait ?



The solutions we can offer are increasing lifetime
Make the mat a bit more eco friendly. (still not eco).
Nylon 6 mats can be made ready for future yarn recycling.

- The current way of cleaning mats, washing and drying prevents further development.
- No significant savings can be made in water and energy consumption using the current way of washing and drying.
EU Green Deal targets can't be reached!
- No recycled content in the rubber
(60-70% of the mats weight is rubber)

To move forward you have to look at the current way of cleaning mats.



Future of rental mats



When looking at the future, we have to question the current the way of washing and drying mats.



The current way of washing limits product development, use of more recycled content, circular solutions, and doesn't offer a solution to significantly reduce water and energy consumption, which are all needed to move forward to reach the EU Green Deal targets.



A solutions for above problems is the use of a flatbed system to wash and dry mats.
(available)

The future offers the following solutions

- no need for gas, green generated electricity for co2 neutral cleaning can be used.
- Water and energy consumption far lower than current way of washing.
(inline with EU Green Deal)
- Almost no mechanical action on the rubber as mats are cleaned flat.
The rubber no longer needs to withstand industrial washing, just flat washing.
- The use of recycled content in the rubber would be possible, rubber from recycled mats can be used.
- Shrinkage of current mats is delayed using this wash process, even current mats will last far longer.

The future offers the following solutions

- Using our new modified primary backing we can reduce carpet shrinkage (current non woven) from 3-4% to less than 0.5% making mats last even longer.
- Current mats are flexible in order to be washed, small carts make them move, they are too flexible. When washed flat, mats can be less flexible, reducing movement on the floor thus increasing performance and safety.
- Using a different carpet construction, the new way of cleaning can be optimized.
- Cleaning performance of the new construction will be better than current mats.
- Instead of big centralized laundries, machines can be placed in distribution centers, reducing logistical cost. (extra co2 saving)

We see that laundries have little knowledge on mats, what is possible what is not. Mats are a good business, profitable, we see no problems, so why change? (These were the words from a CEO of one of Europe's biggest laundries.)



The reason to change is simple, above technology makes it possible for newcomers to easily enter this market.



Building cleaning companies can now offer mat rental themselves and disrupt your rental business.



Think about tesla, their success and how long it took / takes current car manufacturers to get to the same level (they are still not there). Current car manufacturers did not take EV seriously, don't let this happen to you.



As a laundry you have to think and move forward or risk being overtaken !

Advantages you can use

- Better performing mats than current rental mats. (dirt and moisture)
- Use far less water and only green energy in cleaning mats.
- Increase lifetime of any mat.
- Reduce logistical cost.
- Offer lower rental prices. (or better margin)
- More eco friendly mats, using less harmful materials, more recycled content.
- We are working on a non rubber, 100% recyclable backing. (Circular)

Join the future



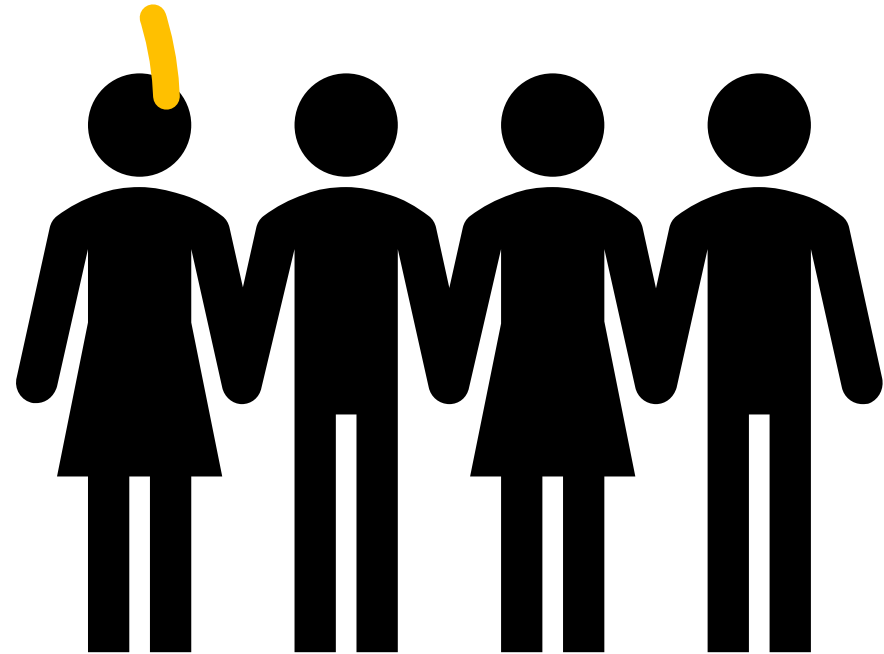
As a laundry you have to think about your future business, reducing water, energy, logistical costs.



Companies investing in this technology will have a head start, if not, you could lose profitable business, business that you might never get back.



You can't look forward and keep doing what you do without questioning why you are doing it and how this affects your future business knowing now that there are options now.



More information

My name is Bob Ballings, active in (washable) mats since 1989.

- Started (logo) mat production for EU manufacturer
- Helped US mat manufacturer to solve rubber and yarn issues.
- Initiated development of a machine to automatically cut borders of mats, now an industry standard.
- More than 20 year experience in rubber formula's for mats.
- Product development
- Pioneer in inkjet printing on carpet (2010)
- Contact to network of experts to make things possible.
- On a mission to take rental mats to the next, sustainable level, join me.

Interested contact me at bob@bobmats.com

more technical background articles on mats, rubber, yarn etc can be found here:
<https://www.linkedin.com/in/bob-ballings-1a461b19/recent-activity/posts/>