

# SUSTAINABLE MATERIALS



## Verification of DMF-free SYNTHETIC/COATED FABRIC manufacturing process on behalf of a German retailer

### INDUSTRY CHALLENGES

Consumers all over the world request transparency on the products they purchase. This call reaches from working conditions to materials and ingredients. Nowadays, most companies selling apparel and footwear have set business strategies on increasing the share of more sustainable materials and reducing the environmental impact from production.

Polyurethane is a material used for rubber boots, historically often containing Dimethylformamide (DMF), which is classified as toxic to reproduction, slightly irritating to the eyes and skin and has been observed to damage the liver. DMF is classified a Substance of Very High Concern under REACH and hence usage legally regulated. Alternative production processes are readily

available, while cross-contamination from shipping, storing or production in the same facility remains a common issue.



### PROJECT GOAL

A leading German retailer added Dimethylformamide (DMF)-free rubber boots to their collection. Entering a new business relationship with a factory claiming to produce DMF-free rubber boots, the retailer wanted to verify the conditions on-site and the PU itself. STS was tasked to assess the facilities' chemical management practices and validated raw materials through laboratory testing.

### RESULTS

The 2-days on-site assessment and laboratory testing showed the following results:

- DMF traces were found in 100% water-based PU coated fabric.
- DMF was found in the solvent-based PU coated fabric.
- No DMF was detected in the original water-based dispersion.
- The water-based production line is not isolated from the solvent based line.



**The expert team concluded, that the DMF traces in the water-based PU coated fabric are from cross-contamination, as the water-based production line has not been isolated from the solvent based production line.**

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