

Study Proposal for EUON: Information on nano-enabled textiles

From AVICENN @VeilleNanos, in partnership with      - April 2023

The following proposal answers the [call for topics](#) launched by the European Union Observatory for Nanomaterials (EUON).

Nanomaterials may enable fabrics to have specific properties - be they [depolluting](#), [anti-bacterial](#) or [anti-odour](#), [water-repellent](#), [anti-UV](#), [warming](#) or [cooling](#), [anti-mosquito](#) or [fireproof](#), etc. However, there is no comprehensive nor reliable set of data on their application in the EU market, and no labelling obligation (outside the Biocidal Products Regulation). The issue of mis- or lack of information, is a major challenge: [tests published](#) by the French authorities this year illustrate how marketing allegations overstate the actual benefits brought by the products, and minimize the information on chemicals treatments they rely on. Last year, AVICENN's [investigation](#) on Ikea's "air-purifying" curtains showed that despite the company's claims, their curtains contained titanium dioxide nanoparticles and were not depolluting.

The presence of nanomaterials in textiles raises questions in terms of risks, especially when considering the life cycle of the treated products. The use of [nanosilver](#), [titanium dioxide](#), or [graphene](#) in face masks, largely marketed since the covid-19 pandemic, and their potential adverse effects, highlight the need to better understand the extent of nano-enabled textiles on the EU market, their health and environmental risks, and the ways to enhance a better regulation of their commercialization.

The scope of the study would thus be twofold:

1) Data on current research and application of nano-enabled textiles in the EU

→ The first part of the study could be dedicated to collecting, analyzing and organizing information on the current research and application of nano-enabled textiles in the EU, considering:

- patents (applied for and granted) in the EU on nanomaterials in textiles (including medical ones)
- EU funded projects on textiles with nanomaterials, and on their potential risks
- Overview of the amount of textiles that contain nanomaterials which are currently being used across Europe, by categories (medical, firefighter PPE, sports, clothing, bedding, home furnishing fabrics...), by types of nanomaterials, and by single use vs. reusable textiles (using REACH dossiers, SDS, the Nanodatabase <https://nanodb.dk>, surveys, etc.)

2) Recommendations on ways to improve information and protection of EU consumers, workers & environment, regarding current applications of nanomaterials in textile products on the EU market

→ This 2nd part of the study, in line with the CSS and EU textile strategy, could:

- elaborate recommendations on the different ways to improve the quantity and quality of information regarding nano-enabled textiles, allowing European and national authorities to achieve better risk assessments
- describe current surveillance of these products by public authorities (cf. [DGCCRF controls](#) in France), and consider potential evolutions of regulatory tools
- identify the non-essential and essential uses of nanomaterials in textiles, in ways that are compatible with circular economy requirements

To date, comprehensive quantitative and qualitative data on nano-enabled textiles is absent. By addressing this issue, EUON could considerably enhance levels of transparency and set the conditions for a better protection of both the environment and human health.