

CELLULOSE AS BIO-BASED INGREDIENT IN RUBBER COMPOUNDS



- **Format:** Online self-learning module
- **Target group:** Researchers
- **Provider:** University of Twente
- **Certificate:** Digital badge
- **Duration:** 2 hours
- **Level:** EQF 5 - 7
- **Language:** English
- **Costs:** Free

Exploring one of the most promising applications of the bio based material previously identified, this training module examines the use of cellulose as a sustainable ingredient in rubber compounds, with a particular focus on the tire industry.

In fact, the tire industry is currently facing new sustainability challenges, especially regarding the replacement of fossil-based raw materials. Leading tire manufacturers have publicly outlined their timelines and strategies for integrating sustainable raw materials, such as recycled and bio-derived components, into their products, with most targeting 40 to 100% sustainable raw materials by 2030, and full sustainability or net zero emissions by 2050.

In this context, cellulose, especially in its nanometric forms, shows great potential as a sustainable filler in tires, thanks to its bio derived nature and suitable particle dimensions. This free online training module is organized into 5 sections: from mixing and processing (with a focus on compatibility and dispersion), through tensile and dynamic-mechanical properties, to other relevant properties, and finally safety and hazard.

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FREE MODULE**

