

AVANZARE

Avanzare are specialized in the development, production and commercialization of high-performance nanomaterials and nanotechnology-based solutions and additives for different materials, mainly plastics and rubber. The applications span across several industries: automotive, aeronautics, safety equipment, footwear, painting, building, wires and cable sector, fabrics, packaging and paper, among others.



Material

- **Graphene oxide functionalised with chitosan**

The material is used in the automotive sector as a flame redundant additive



"The functionalised graphene oxide can substitute the halogenated additives that are commonly used thanks to its good flame retardant properties and enhanced mechanical resistance."

OBJECTIVES

- To develop safer and more sustainable flame-retardant additives for use in the automotive sector

SAFETY GOALS

- To increase safety by improving operational procedures for exposure mitigation at production, use and disposal
- To assess how the modified nanomaterials are released from the composite and transform throughout the life cycle, thereby affecting exposure and toxicity
- To increase the reuse of material loss during production and recyclability of the final product

SUSTAINABILITY GOALS

- To provide a potential substitute for critical raw materials
- To reduce the consumption of water used for washing the final product
- To increase the reuse of material loss during production by 80% and improve the recyclability of the final product