

# Hazard assessment of W and Mo sulphide nanomaterials for automotive use

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## Description

Engineered nanomaterials (ENMs) are growing in interest and use due to the enhancements envisaged in many applications. ENM hazard identification and exposure scenarios are growing in interest too. Inhalation, ingestion and assimilation through skin during ENM production or use have to be considered as possible events, and potential ENM toxicity has to be investigated before new ENM-based products are placed on the market. To design new ENM-based additive in lubricants for automotive application, the European FP7 Project AddNano is investigating the use of fullerene-like inorganic nanomaterials, including transition metal disulphides. In this work, the potential toxicities of well-characterized pristine MoS<sub>2</sub> and WS<sub>2</sub> ENMs were evaluated by in vitro cellular and a cell-free chemical tests. Cytotoxicity and oxidative stress on human pulmonary epithelial cells (A549), ENM surface reactivity (free ...