

## **European Standardization in Nanotechnologies and Relation with International Work: The Standardization Can Help Industry and Regulators in Developing Safe Products**

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**Abstract :** Nanotechnologies have enormous potential to contribute to human flourishing in responsible and sustainable ways. They are rapidly developing field of science, technology and innovation. As enabling technologies, their full scope of applications is potentially very wide. Major implications are expected in many areas, e.g. healthcare, information and communication technologies, energy production and storage, materials science/chemical engineering, manufacturing, environmental protection, consumer products, etc. However, nanotechnologies are unlikely to realize their full potential unless their associated societal and ethical issues are adequately attended. Namely nanotechnologies and nanoparticles may expose humans and the environment to new health risks, possibly involving quite different mechanisms of interference with the physiology of human and environmental species. One of the building blocks of the 'safe, integrated and responsible' approach is standardization. Both the Economic and Social Committee and the European Parliament have highlighted the importance to be attached to standardization as a means to accompany the introduction on the market of nanotechnologies and nanomaterials, and a means to facilitate the implementation of regulation. ISO and CEN have respectively started in 2005 and 2006 to deal with selected topics related to this emerging and enabling technology. In the beginning of 2010, EC DG 'Enterprise and Industry' addressed the mandate M/461 to CEN, CENELEC and ETSI for standardization activities regarding nanotechnologies and nanomaterials. Thus CEN/TC 352 'Nanotechnologies' has been asked to take the leadership for the coordination in the execution of M/461 (46 topics to be standardized) and to contact relevant European and International Technical committees and interested stakeholders as appropriate (56 structures have been identified). Prior requests from M/461 deal with characterization and exposure of nanomaterials and any matters related to Health, Safety and Environment. Answers will be given to: - What are the structures and how they work? - Where are we right now and how work is going from now onwards? - How CEN's work and targets deal with and interact with global matters in this field?

**Keywords :** characterization, environmental protection, exposure, health risks, nanotechnologies, responsible and sustainable ways, safety

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