

NanoFASE Deliverable D4.2

Release estimations during ENMs and nano-enabled products value chain

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Research Report Summary

During nano-enabled products life cycle (i.e. production, manufacturing, use, recycling and end-of-life) nanomaterials release to the environment could occur, what needs to be studied to avoid potential environmental concerns. Hot spots, understood as those scenarios with a higher potential nanomaterial release, were determined for the different NANOFASE case studies in D1.2 – Report in the pathway analysis. In the work presented in this deliverable the hot spots were simulated in controlled laboratory conditions to determine if release occurred, and in case it did, the amount (release rate) and form (fate) were determined. The different experimental methodologies, most of them based on standardized protocols, are described together with the techniques used to characterize the nano-enabled products before and after the experimental simulation. The results and conclusions obtained were summarized in a format that can be used as input for the NANOFASE model, which includes the release rates, the release forms, the scenario from where release occurs and the environmental compartment where released nanomaterials are more likely to go.



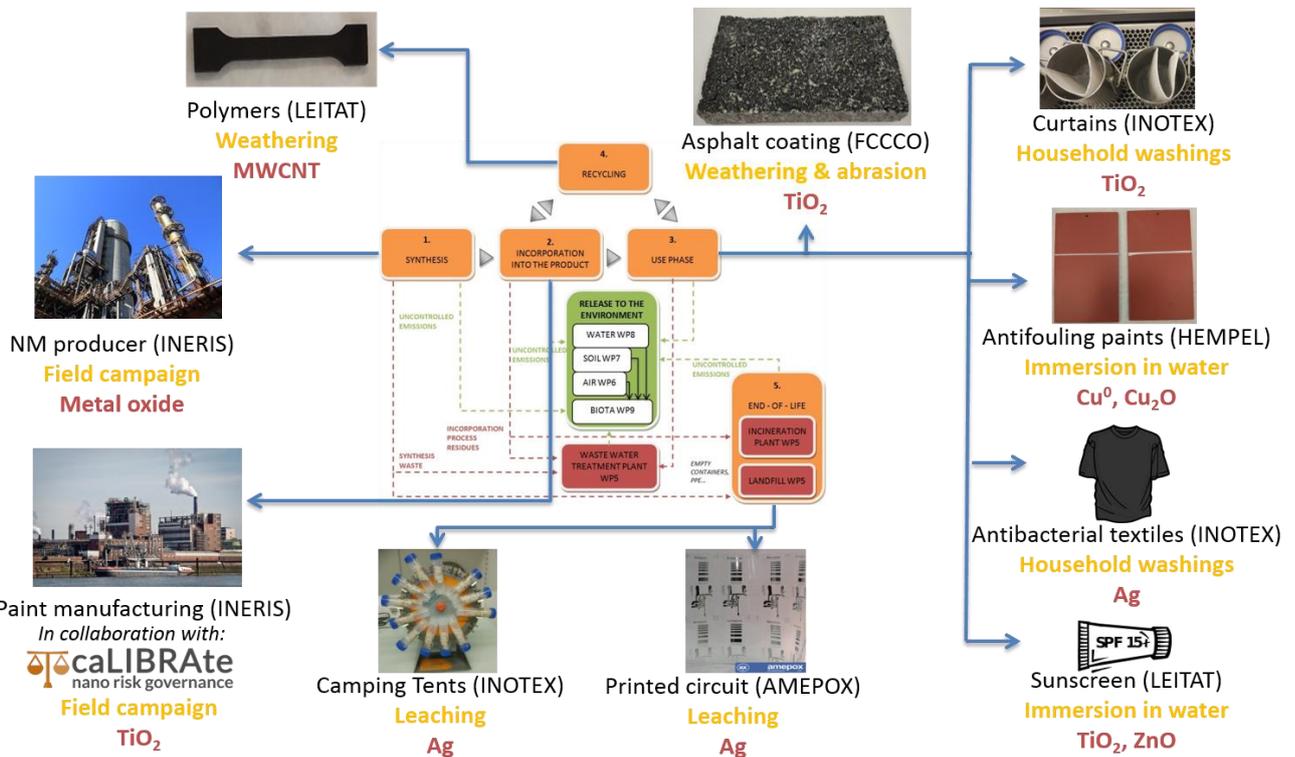


Figure 1 – Diagram showing all the nano-enabled products studied in D4.2, the nanomaterials they incorporated and the specific life cycle stage that was simulated.

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