

Biocide stability when applying redox initiated emulsion polymerization

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Market requirements demand polymer dispersions with a maximum protection against microbes but minimal addition of biocides. The blanket solution, however, sought by the paints and coatings market does not exist yet. How can microbial stability of polymer dispersions be guaranteed using in-can biocides despite ever increasing regulatory challenges? And what influence does the correct selection of redox agents, as initiators for the polymerization process, play regarding biocide stability - it is well known that biocidal active ingredients are often destabilized by redox agents.

Biocide specialist SANITIZED AG and redox initiation specialist L. BRÜGGEMANN GmbH & Co. KG have teamed up to follow these questions in a joint study. The results of the study show that an appropriate combination of biocide and redox agent is required to avoid potential side reactions. Within the framework of the study, latex emulsions were polymerized, using different reducing agents and oxidation agents. After that, biocides were added and the stability over time of these biocidal active substances were analyzed.