

## NEW ADDITIVES TO FULFILL THE REQUIREMENTS OF RELEASE COATING APPLICATIONS

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Nowadays, silicones coatings are more and more spread around the world thanks to their outstanding properties such as low glass transition temperature, low surface tension, high thermal stability, good water repellency and innocuity [1] [2]. Among all the applications, the release coating applications represents more than 50 billion square meter of release liners, mainly for label applications thanks to silicone's low Tg and surface tension and for food contact applications thanks to silicone innocuity [3].

As the world population increases, the demand of release liners based on silicone increases as well. The required increase of productivity is achieved by increasing the speed of coating machines. However, such increase of speed leads to some drawbacks such as formation of aerosol (misting), poor adherence of the silicone onto specific substrates, or foaming.

The challenge is thus to provide new additives fulfilling the requirements of the different market for release coating applications. In this presentation, it will be showcased a new anti-misting agent based on ionic compounds which decreases misting around the coating head [4], leading to safer and more reliable coating conditions. When silicone coatings are used on filmic substrates, the formulation plays an important role to achieve the right level of anchorage. New anchorage additives, specifically adapted for silicone emulsions or solventless silicone compositions, containing moreover less VOC than conventional additives, have been designed in order to promote adhesion of silicone coatings onto PET films [5]. Finally, by increasing the speed of paper machines producing bakery papers, it is important to control the runnability of the machine by controlling the foam. This can be achieved thanks to a specific anti-foam emulsion additive which improves greatly the processability leading to less spillage of silicone emulsions, more consistent quality of bakery papers, used every day by every one of you!

### References:

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