

Meeting with the plastics producers, 11/2/22

5.1.2e
5.1.2e – ETRMA/NRK
5.1.2e ? And 5.1.2e NRK

Foil producers in NRK

Produce film for food packaging. Process PE, PP for making film, using a processing aid. Those are the dominant plastics for packaging. For production of trays they buy in film.

Key question for us is the need information on tonnages and emissions and availability of alternatives.

Blown film and cast film extrusion processes

Processing aids (PA) added in small amounts of master batch - 0.2%

Some small number of final film (0.0xx1%) is PFAS – seems to be a dilution factor from the Master Batch. Concentrations in factory undetectable

Does not enter the waste-water system, and production does not need water for cooling.

Used in food and all film production. Without the PA the film quality is poor and the thickness increases, optical properties are inferior

Thin film was only produced when PFAS was brought in:

- Was 50-70 micron
- Now 10-30 micron film

Benefit of reduced plastic use

NRK were unsure if PFAS free processing aids exist – need to talk to masterbatch producers

Much packaging material brought in from outside the EU – significant quantity, but they don't have the information available to say how much.

Other material looked at today following from the call:

No knowledge of boron nitride (BN) made by St Gobain <https://www.bn.saint-gobain.com/how-boron-nitride-polymer-processing-aids-enable-pfas-free-food-packaging> . Does not yet appear to be on the market. Hazard profile of BN suggests eye irritant, possible respiratory irritant, possible effects on aquatic life, though little potential for either when it is embedded in plastic.

Following sites are interesting as the companies involved have made their solution open-source to stimulate wider action across the industry:

<https://www.solenis.com/en/resources/news-releases/2021/solenis-zume-collaboration>

<https://www.zume.com/zume-x-solenis>

<https://www.zume.com/solutions>

Also interesting to see that they talk about '9 months of deep collaboration and R&D' having been required to come up with the alternative. I presume they want us to think that's a lot of effort – I am surprised how quickly they could do it!

<https://www.microban.com/blog/top-5-benefits-of-using-polymer-masterbatches> provides overview - example in table is not very transparent – additive is either 100% additive (0.25lb) or 10% concentration of additive in 2.5lb of masterbatch. i.e. same amount of additive, just easier to process and guarantees better mixing.