

CEPE Comments on the EA REPORT “Plastic Paints The Environment”

EXECUTIVE SUMMARY

Recently the title report was published. In its conclusions, paints are called the dominant cause for emissions of microplastics to the environment (soil and water). The authors base their conclusions on opinions from experts. They did not provide any new data on the microplastics problem. By deviating from definitions commonly used in the EU for the microplastics problem and not using their own jargon consistently, they confuse the reader, rather than guiding the reader through the report. The authors have not approached paint makers associations for peer review, which is a pity and a missed opportunity.

CEPE, the EU association for paints, printing inks and artist colours manufacturers, strongly disagrees with the conclusions from the study, because inadequate or even wrong input was used for the Monte Carlo analyses the authors made. Although many things are still not known, especially on the formation of secondary microplastics, and scientific studies are needed to fill in the biggest knowledge gaps, we will list a few objections we have to the EA study.

- The global market volumes EA used are on average 20% higher than the actual volumes collected by industry experts (the Orr and Boss statistical data on the global paints market).
- This overestimation varies per sector; for Automotive coatings they overestimate by a factor 2.5; for Marine coatings EA overestimates the market volume even by a factor 5!
- Besides the fact they EA assumes that coatings manufacturers add plastics to their products (which is not the case), EA overestimates the amount of polymeric content in paints by a factor 2, on average.

Because of the three bullets above only, the calculated emissions by EA need to be reduced on average by 60% (but for marine coatings by 90% !).

And there is more. The remarks below have a big impact on the assumed role of wear and tear and reported quantities for emissions. In some areas the reductions in emissions will lead to substantially different conclusions on the actual emissions of microplastics.

- The highest emission contributions come from sectors and life cycle steps where they found the least information on. Because of scarcity of sources in the world in general, re-use of metals becomes more common even in non-regulated regions. This means that a substantially higher fraction of paints on metals will be burned as part of the recycling of precious metals. Emissions of plastics from end of life processes, especially in the EU need to be downsized considerably (>50%) due to regulations in the EU on circular economy, waste handling processes and local license-to-operate process controls.

- The authors claim regional differences for the use of paints, the fate of unused paints and the end of life processes for painted articles. That makes sense if some homogeneity exists within that region. But for Europe (formed by the EU and the former Soviet Union), very big differences exist between already regulated processes in the EU, vs. non-regulated processes outside the EU. The numbers for emissions in the EU of mismanaged waste should also be downgraded considerably (>50%).
- CEPE believes that secondary microplastics, formed by wear and tear will mainly end up in soil and the mobility of solid particles from soil to waterways is considered to be very low. EA uses very high ratios for this mobility, without a reasonable explanation. The mobility of microplastics from soil to water. should be downgraded by a factor 50-100.
- The assumptions for mismanaged disposal of unused products in low income countries (up to 30%) is way too high. In poor countries, people are very cautious with the goods they buy. We advise to reduce this number by a factor 4-5.

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