

Mixture Assessment Factor explained

What's the issue?

The Commission has a well-established process in place to assess the potential risks that substances could pose to the environment and to people under the REACH regulation. Substances - on their own and as used in mixtures - are covered via the chemical safety assessment that considers the entire life cycle, including the use and the waste life cycle.

The idea was put forward that unintentional mixtures of chemicals – the so-called cocktail effect – could have unknown toxic effects on humans and the environment, even when it is ensured that all compounds are present at concentrations that are considered safe.

Under the Chemical Strategy for Sustainability, the Commission plans to put a system in place that covers the combination effects of unintentional chemical mixtures. Because of the complexity linked to regulating an almost infinite number of possible combination of chemicals, the concept of a Mixture Assessment Factor (MAF) was launched.

The MAF proposal

Applying an additional risk factor to cover all eventualities for all products may look like a pragmatic solution but is in fact a political decision where the factor (a MAF of 2, 5, 10 or other) would be randomly picked. An initial scenario of ECHA based on REACH data using a MAF of 10 on a selected, non-representative group of 24 substances to investigate the impact and consequences suggested a minor impact on industry. There is no scientific justification behind the MAF concept as it is too broad, largely covering hypothetical exposures and risks rather than real-life scenarios.



Consequences of a MAF

A single generic MAF cannot account for the complex matrix of interactions for all substances and at the same time be proportionate to tackle those unintentional cocktail effects that could occur.

An initial assessment by industry showed that if a MAF were added, **many products would no longer be available**. With a MAF of 2, a high number of substances would be impacted and additional risk assessment for theoretical exposures would be needed.

Adhesives and sealants products typically are already covered for their various uses under REACH in the chemical safety assessment, which already comprises various safety factors. With an additional general and not science-based factor like MAF, many of the ingredients may no longer be available for our products. This in turn may result at least in additional testing, higher tier calculations and, in many cases, the ban of single substances even in adhesives and sealants that have been used safely for decades.

A CONCEPT WHICH LEADS TO TANGIBLE RESULTS AND ADDED VALUE FOR SAFEGUARDING HUMAN HEALTH AND THE ENVIRONMENT SHOULD BE SCIENCE-BASED AND MANAGEABLE AS REGARDS IMPLEMENTATION.

A non-scientific and arbitrarily chosen factor like MAF will lead to the disappearance of many essential products that have been used safely for decades.

Building insulation using appropriate sealants and adhesives improving the overall performance of the windows, doors and insulation of a building, reducing energy losses.



Lightweight cars - Adhesive solutions for lightweight composite materials in the automotive industry allow the reduction of the CO₂ footprint and improve passenger safety.



Adhesives enable wooden structural elements for **innovative construction** technologies, thus saving energy and reducing CO₂ emissions by the use of renewable and recyclable materials.



Adhesives are instrumental in many **paper and label products**, such as books and bottle labels. Water-soluble adhesives support multiple uses and recycling of returnable glass bottles, allowing re-use and recycling, key enablers of a circular economy.



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