



Mineral Oil Barrier

in Mono- and Polyolefin Laminates

MOAH Compounds in Food

The presence of mineral oil aromatic hydrocarbons (MOAH) in food is an indication of contamination with mineral oils. This is problematic because MOAH are suspected to contain carcinogenic components.

There are various sources from which MOAH can enter food. One of these is via packaging. When contamination occurs via packaging, it is usually via recycled fiber cartons. These often serve as packaging for flexible plastic pouches.

EU Recommendation for MOAH Limits

In the summer of 2022, the European Union made recommendations for MOAH limits for the first time. These state that foods above a certain MOAH content should be pulled from the market:

- Dry foods with a fat content $\leq 4\%$: 0.5 mg MOAH/kg food
- Foods with a fat content $> 4\%$: 1 mg MOAH/kg food
- Fats or oils: 2 mg MOAH/kg food

Wipf AG's Standard Pouch Laminates Protect

The laminates used for standard pouches are impenetrable to MOAH. This is because they contain at least one layer of aluminum, PA and/or PET. These materials act as functional barriers for MOAH. With such packaging laminates, food is adequately protected from contamination with MOAH.

Attention: Pouches made of mono- and polyolefin laminates usually lack an aluminum, PA or PET layer. Therefore, depending on the underlying conditions, action may be required to prevent contamination of the packed food with MOAH.

Mineral Oil Saturated Hydrocarbons/MOSH

Mineral oil saturated hydrocarbons (MOSH) are also components of mineral oils. According to the current state of science, MOSH are not considered critical and were therefore not included in the above-mentioned EU recommendations. However, other countries continue to define limits for MOAH and MOSH. In this case, you can assume that the information contained here on the barrier effect for MOAH also applies to MOSH.



Solutions for Mono- and Polyolefin Laminates

Film solutions with a barrier are available for these materials: Wipf AG has various polyethylene (PE) as well as polypropylene (PP) films with a MOSH/MOAH barrier effect at its disposal. If required, these can be used in the development of mono- or poly-olefin laminates.

Please let us know at an early stage if this is relevant to you. Do you have any further questions on the subject of packaging and MOAH/MOSH? Then we look forward to hearing from you by email at entwicklung@wipf.ch

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