

Migration / Update White Lined Chipboard

To whom this may concern,

Mayr-Melnhof Karton (MMK) takes all food safety related topics very seriously. What follows is our response to frequently asked questions on this topic:

All of our cartonboard qualities comply with the “Paper and Board for Food Contact” of the German Federal Institute for Risk Assessment (BfR) XXXVI recommendations, plus the 34th notation, Federal Health Journal 10, 14 (1967), and the 222nd memorandum, Federal Health Journal 63, 133-134, state of 9 January 2020.

Our mills are subject to strict procedural and process regulations and have excellent quality management systems following ISO 9001 and hygiene management systems in accordance with EN 15593, which are an integral part of our management systems.

All of our grades are regularly and thoroughly tested in our state-of-art, company owned laboratories, as well as in independent and external ones. According to the provisions of regulation (EU) 1935/2004 of the European Parliament and of the Council of 27 October 2004 and of regulation (EU) 2023/2006 of the European Parliament and of the Council of 22 December 2006 we identify and specify which of our board qualities are approved to come into direct or indirect contact with foodstuffs.

Update of the notification procedure of the German Mineral Oil Ordinance

In August 2020, the German Government notified the latest draft of its Mineral Oil Ordinance “22. Verordnung zur Änderung der Bedarfsgegenständeverordnung“ to the European Commission. The updated version requires the use of a functional barrier in paper or cartonboard food contact materials containing recycled paper. Due to objections by the Netherlands, Spain as well as the EU-Commission the standstill period was prolonged until 18th February 2021.

The EU-Commission pointed out, that the aim should be to find the principal sources of mineral oil in the supply chain and to determine, which preventative measures can target these sources most effectively. Other potential sources of MOAH in the food chain include cross contamination, as well as oils and lubricants used for processing or during transport of the foodstuff. A reduction of MOAH originating from one of the numerous other sources than packaging is therefore considered a more effective measure.

FOODBOARD™: innovative cartonboard with a functional barrier

In 2016, MMK has launched **FOODBOARD™**, a product safe board.

- **FOODBOARD™** is a high-quality, coated cartonboard with a reverse side barrier designed for safe food packaging. This means packed food can be completely

shielded from the environment against defined unintended substances such as mineral oils, phthalates, and bisphenol A. The effectiveness of the barrier was tested over a period that simulated 3-years and was then subsequently certified by the renowned FABES institute (Forschungs-GmbH for Analytic and Evaluation of Mass transfer Processes). The testing included substances with various properties, such as polar, nonpolar, hydrophobic, hydrophilic etc. as leading substances; including as well other aromatic compounds, not just MOAH, and alkane and cyclic compounds, not just MOSH.

The FOODBOARD™ quality also underwent additional more stringent tests to the standard analysis by FABES and ISEGA, utilising a 10 ppb screening, which also focussed explicitly on MOSH and MOAH migration. The effectiveness of the barriers against mineral oils was once again confirmed: by the use of FOODBOARD™ no migration of MOAH into food exists (detection limit 0.15mg/kg). All these results were simultaneously replicated in our own laboratory, but in this case with the extended period test (up to three years) using real foodstuff.

- **Extensive tests and investigations of our own qualities are ongoing**, including the food packed in printed folding cartons of our largest customers. In a global context, we are one of the few paper and board manufacturers having our own mineral oil analytics, which is located at our R&D centre in Frohnleiten, Austria. We are therefore able to measure and test there according to published BfR methods.

Grade	MOSH C16-C25 [mg/kg]	MOAH C16-C25 [mg/kg]
GD2/GD3/GT2/GT3/GT4	260 +/-60	90 +/-40
GD Liner	225 +/-60	75 +/-40
GT1	70 +/-50	25 +/-15

Table: Average content of MOSH and MOAH in different MMK board qualities in mg/kg board

- **Recommendation of low migration printing inks** for folding cartons specified for food applications, irrespective of which carton board quality is used. This is vital as packaging printing inks have been identified as one of the main sources of mineral oil which is found in packed food products.

MM Karton's stated objective is to continue to produce and offer sustainable and safe food packaging solutions.