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PRO-TEX MOSH/MOAH
PROTECTOR

SNAPSHOT ON MINERAL OIL

INTRODUCTION

A RECENT STUDY SHOWED THAT 83% OF THE PRODUCTS TESTED ARE CONTAMINATED BY MINERAL OILS.

The sources of mineral oil contamination are several and recycled carton is one of them. A recent study carried out by the non-profit organization Foodwatch (October 27, 2015) showed that the "83% of tested products contained MOSH and 43% contained MOAH".

Suspected sources of MOSH and MOAH contamination are: food packaging cardboard (in particular packaging made from recycled materials) and secondary packaging. Furthermore the study disclosed that the 45% of the analysed products have a primary pack made with recycled carton.

Following these results, in its email petition directed to the EU Commissioner for Health & Food Safety, Foodwatch demands functional barriers in (recycled) paper and food packaging board as mandatory requirements to prevent migration of MOSH and MOAH, as in 2013 EFSA Scientific Opinion on Mineral oil.

THE THIRD DRAFT OF THIS ORDINANCE PROPOSED TO SET SML (SPECIFIC MIGRATION LIMIT) AS FOLLOWS:

FOODSTUFF

- 2 mg/kg for MOSH
- 0.5 mg/kg MOAH

RECYCLED PAPER

- 24 mg/kg packaging for MOSH
- 6 mg/kg packaging for MOAH

On March 15, 2017, the German Ministry for Nutrition, Agriculture and Consumer Protection (BMELV) announced a new draft version of the 22nd ordinance amending the Consumer Goods Ordinance ("mineral oil ordinance"). In the beginning of March, the ordinance was sent for written consultations to the federal states of Germany and to industry associations.

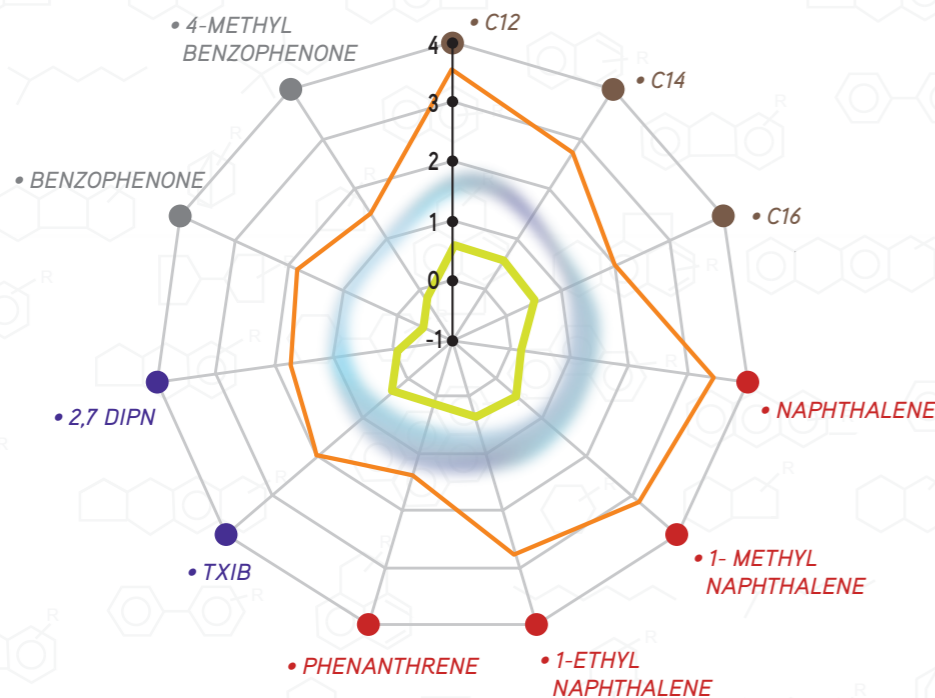
Although there is neither a European nor national legislation enforced, several food retailers (E.Leclerc, Carrefour, Lidl, Intermarché, Casino, and Système U) announced that their own-brand products will not exceed a limit value of 2 mg/kg MOSH and 0.5 mg/kg MOAH. These limit came from the 3rd German draft. Germany is the only European country who has the most advanced national draft legislation on this topic.

The ordinance provides a specific migration limit (SML) of 0.5 mg/kg food for mineral oil aromatic hydrocarbons (MOAH) and recommends the introduction of functional barriers to reduce the migration of chemicals from recycled paper and board used in contact with food. However, in comparison to previous versions of this draft ordinance, the SML for mineral oil saturated hydrocarbons (MOSH) of 2 mg/kg food was removed in the most recent draft. (www.foodpackagingforum.org/.../new-draft-of-german-mineral)

BARRIER TO MINERAL OIL

INFOGRAPHIC

Log maximum permeation rate (40 days at 40°C)



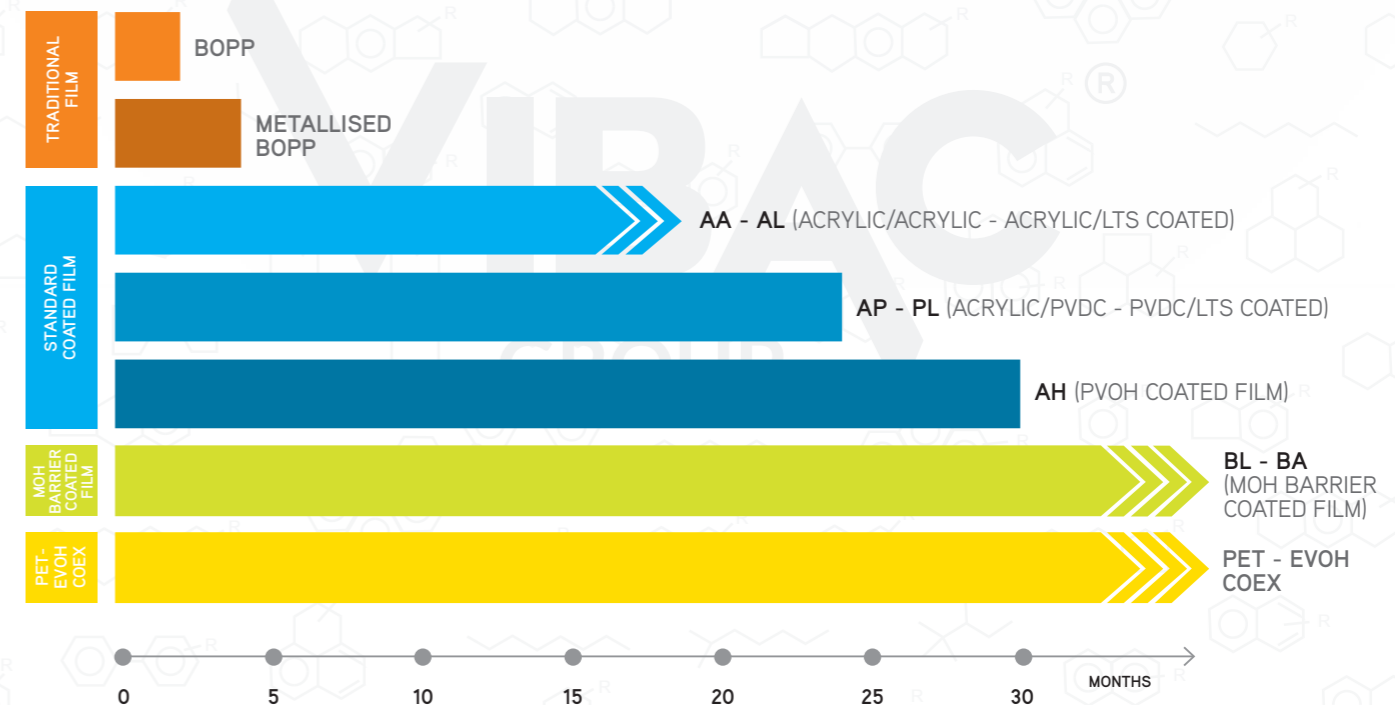
Data are based on studies carried out by Fraunhofer IVV Institute (PA/4913/16) Testing protocol and data are available upon request

MINERAL OIL

- **MOSH**
 - C12
 - C14
 - C16
- **MOAH**
 - NAPHTHALENE
 - 1-METHYL NAPHTHALENE
 - 1-ETHYL NAPHTHALENE
 - PHENANTHRENE
- **INK ADDITIVE**
 - TXIB
 - 2,7 DIPN
- **PHOTO INITIATOR**
 - BENZOPHENONE
 - 4-METHYL BENZOPHENONE

BARRIER TO MINERAL OIL

- **TRADITIONAL FILM**
- **STANDARD COATED FILM**
- **MOH BARRIER COATED FILM**



Data are based on studies carried out by Fraunhofer IVV Institute (PA/4913/16) and Ircpack Srl (RT 13-1057) Testing protocol and data are available upon request