

# Certificate

## Food regulatory assessment of PE-plates

**Client:** Tridelta Siper GmbH  
Ostkirchstr. 127  
44287 Dortmund

**Order:** PA/4171/19

**Sample:** HP FI, HP 20, HP 5, HP antistatic, HP 20,  
HP 60 antistatic

The food regulatory assessment of PE-materials (test rods) is related to the investigations from order PA/4778/18 and PA/5108/18 (Fraunhofer IVV test report PA/4778/18, dated 15.11.2018 and PA/5108/18, dated 15.02.2019).

The overall migration test was performed with 3 % acetic acid and 95 % ethanol as alternative for the determination of the overall migration in olive oil by total immersion at the conditions 10 d / 40 °C according to the European Standard EN 1186-3 and EN 1186-14, respectively.

The overall migration limit is set at 10 mg/dm<sup>2</sup> surface area according to the European Plastics Regulation (EU) No 10/2011 (lastly amended by Regulation (EU) No 2019/37).

The analytical tolerance is  $\pm 2$  mg/dm<sup>2</sup> for aqueous simulants and 95 % ethanol.

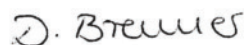
The above mentioned samples comply with the overall migration limit in contact with all kind of foods at long term storage conditions at room temperature or below, including hot fill (e.g. 2 h / 70 °C or 15 min / 100 °C).

Fraunhofer Institute  
Process Engineering  
and Packaging

  
Annika Ebert

(Dep. Head of Migration Laboratory)

Freising, 11.03.2019



Daniela Brenner  
(Scientist)

## Certificate

Food regulatory assessment of the overall migration from the PE-plaques "HP 10"

**Client:** Tridelta Siper GmbH  
44287 Dortmund

**Order:** PA/4504/17

The assessment of the plaques "HP 10" consisting of sintered UHMW-PE is related to the investigation results of the Fraunhofer IVV test report PA/4504/17 dated 25.07.2017.

The overall migration was determined into 3 % acetic acid and into the alternative fat simulant 95 % ethanol at the contact conditions 10 d / 40 °C according to the European Standards EN 1186-3 and 1186-14.

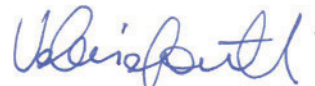
The overall migration limit is set at 10 mg/dm<sup>2</sup> food contact area according to the European Plastics Regulation (EU) No 10/2011 (lastly amended by Regulation (EU) No 2017/752).

The investigated samples "HP 10" are in compliance with the overall migration limit in contact with all types of food at any long term storage at room temperature or below, including hot fill (e.g. 2 h / 70 °C or 15 min / 100 °C).

Fraunhofer Institute  
Process Engineering  
and Packaging

  
Carina Gehring  
(Scientist in Charge)

Freising, 17.08.2017

  
Valeria Guazzotti  
(Scientist)

## Certificate

Food regulatory assessment of the overall migration from the PE-plaques "HP 40"

**Client:** Tridelta Siperma GmbH  
44287 Dortmund

**Order:** PA/4162/14

The assessment of the plaques "HP 40" consisting of sintered PE is related to the investigation results of the Fraunhofer IVV test report PA/4013/14, part 1, dated 17.2.2014.

The overall migration was determined into 3 % acetic acid and into the alternative fat simulant 95 % ethanol at the contact conditions 10 d / 40 °C according to the European Standards EN 1186-3 and 1186-14, respectively.

The overall migration limit is set at 10 mg/dm<sup>2</sup> food contact area according to the European Plastics Regulation (EU) No 10/2011 (lastly amended by Regulation (EU) No 1183/2012).

The investigated sample "HP 40" is in compliance with the overall migration limit in contact with all types of food at any long term storage at room temperature or below, including heating up to 70 °C for up to 2 hours, or heating up to 100 °C for up to 15 minutes.

Fraunhofer Institute  
Process Engineering  
and Packaging

Freising, 17.3.2014



Annika Seiler  
(Dep. Head of Migration Laboratory)



Carina Gehring  
(Scientist)

## Certificate

Food regulatory assessment of the overall migration from the PE-plaques "HPR FI"

**Client:** Tridelta Siper GmbH  
44287 Dortmund

**Order:** PA/4274/17

The assessment of the plaques "HPR FI" consisting of sintered UHMW-PE of Ticona with 5% stainless steel 1.4404 on the non food contact side is related to the investigation results of the Fraunhofer IVV test report PA/4274/17 dated 09.05.2017.

The overall migration was determined into 3 % acetic acid and into the alternative fat simulant 95 % ethanol at the contact conditions 10 d / 40 °C according to the European Standards EN 1186-3 and 1186-14.

The overall migration limit is set at 10 mg/dm<sup>2</sup> food contact area according to the European Plastics Regulation (EU) No 10/2011 (lastly amended by Regulation (EU) No 2016/1416).

Considering the analytical tolerance of the method, the investigated sample "HPR FI" is in compliance with the overall migration limit in contact with all types of food at any long term storage at room temperature or below, including heating up to 70 °C for up to 2 hours, or heating up to 100 °C for up to 15 minutes.

Fraunhofer Institute  
Process Engineering  
and Packaging

Freising, 09.05.2017

  
Carina Gehring  
(Scientist in Charge)  
Petra Schmid  
(Scientist)