

TÜV Rheinland LGA Products - Information

01/2019

New Versions of Paper Standards EN 646, EN648 and EN 1104 published

In November 2018, several standards related to paper and board used for food contact materials were published:

- EN 646:2018 for Paper and board intended to come into contact with foodstuffs. Determination of colour fastness of dyed paper and board
- EN 648:2018 for Paper and board intended to come into contact with foodstuffs. Determination of the fastness of fluorescent whitened paper and board
- EN 1104:2018 for Paper and board intended to come into contact with foodstuffs. Determination of the transfer of antimicrobial constituents

They replace the standards from earlier years 2005 and 2006. The above standards describe procedures for the testing of paper and board food contact materials to check if they are safe in contact with food within the meaning of Article 3 Regulation (EC) No. 1935/2004.

Summary of major changes compared to the previous versions:

Standards	Changes										
EN 646:2018	1. Change of test fluid - “saliva simulant” has been removed and the test fluid “alkaline salt solution” has been introduced										
	2. New test conditions – 2 additional conditions have been established to match different usage of paper and board materials										
	<table><tr><th>Procedures A-D</th><th>Simulation of the contact</th></tr><tr><td>Procedure A 24 h at (23 ± 2) °C</td><td>long duration contact</td></tr><tr><td>Procedure B 4 h at (23 ± 2) °C</td><td>medium time contact</td></tr><tr><td>Procedure C 10 min at (23 ± 2) °C</td><td>short time contact</td></tr><tr><td>Procedure D 30 min at (120 ± 3) °C in oil 30 min at (90 ± 3) °C in water</td><td>hot contact fatty food moist food</td></tr></table>	Procedures A-D	Simulation of the contact	Procedure A 24 h at (23 ± 2) °C	long duration contact	Procedure B 4 h at (23 ± 2) °C	medium time contact	Procedure C 10 min at (23 ± 2) °C	short time contact	Procedure D 30 min at (120 ± 3) °C in oil 30 min at (90 ± 3) °C in water	hot contact fatty food moist food
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EN 648:2018	<ol style="list-style-type: none"> 1. Change of test fluid - "saliva simulant" has been removed and the test fluid "alkaline salt solution" has been introduced 2. New test conditions – 2 additional conditions have been established to match different usage of paper and board materials <table border="1"> <thead> <tr> <th>Procedures A-D</th><th>Simulation of the contact</th></tr> </thead> <tbody> <tr> <td>Procedure A 24 h at (23 ± 2) °C</td><td>long duration contact</td></tr> <tr> <td>Procedure B 4 h at (23 ± 2) °C</td><td>medium time contact</td></tr> <tr> <td>Procedure C 10 min at (23 ± 2) °C</td><td>short time contact</td></tr> <tr> <td>Procedure D 30 min at (120 ± 3) °C in oil 30 min at (90 ± 3) °C in water</td><td>hot contact fatty food moist food</td></tr> </tbody> </table> 3. Different kind of glass fibre paper for testing purpose 	Procedures A-D	Simulation of the contact	Procedure A 24 h at (23 ± 2) °C	long duration contact	Procedure B 4 h at (23 ± 2) °C	medium time contact	Procedure C 10 min at (23 ± 2) °C	short time contact	Procedure D 30 min at (120 ± 3) °C in oil 30 min at (90 ± 3) °C in water	hot contact fatty food moist food
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EN 1104:2018	<ol style="list-style-type: none"> 1. Different requirement for inhibition zone 2. Clear approach for the number of test samples (9 samples) 										

Recommendation for Action

According to above summary table, the changes make the new standards not comparable to the previous versions. As some regulations and guidance documents refer to these standards without specifying an edition, we recommend testing according to the latest versions. We can offer this at short notice.

For further technical information, please contact us:

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