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30 January 2013/Product Safety /Hannelore Klett /kl
Direct line: - 336

Öko-Tex Standard 100 - customer KASI BOHEMIA S.R.O. TSCHECHIEN

Ladies and Gentlemen,

Thank you for your inquiry dated 22 January 2013 regarding Öko-Tex Standard 100.

This standard only refers to the finished fabric and not to the chemicals, auxiliaries or dyestuffs. We did, however, examine the CHT products mentioned below if exceeded limit values regarding Öko-Tex Standard 100 (edition 01/2013) are expected on the finished fabric:

**COLORMATCH 001 WEISS
COLORMATCH ME 112 GOLD
COLORMATCH PH 451 GRUEN
PRINTPERFEKT 226
PRINTPERFEKT 226 EC
PRINTPERFEKT BLANC 450
PRINTPERFEKT BLANC 600
PRINTPERFEKT BLANC FF**

**PRINTPERFEKT BLANC FLEX
PRINTPERFEKT DC 4
PRINTPERFEKT DC-AGENT
PRINTPERFEKT LAC 70
PRINTPERFEKT LAC FLEX
PRINTPERFEKT STIC SP 2
PRINTPERFEKT STIC SP 5**

We can confirm that according to the manufacturing recipe the stated products do not contain any substances which are prohibited or restricted according to Öko-Tex Standard 100 requirements with the exception of the substances stated below.

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30-01-2013



According to our knowledge the raw materials used by us neither contain any substances of the criteria mentioned above. This information is based on raw material research. Routine contamination analyses of the substances mentioned in the above criteria are neither carried out by us nor by our pre-suppliers.

The products are neither auxiliaries for biocide finishing nor for flame retardant finishing.

For the product **COLORMATCH ME 112 GOLD** we do not have any experience regarding extraction of the copper contained and thus do not recommend these for **Öko-Tex Standard 100**.

Please note that the product **COLORMATCH PH 451 GRUEN** contains zinc sulphide which is doped with copper chloride (Cu content < 120 ppm). We do not have any experience in terms of extractability of the copper contained in this product.

According to our present state of knowledge, **COLORMATCH PH 451 GRUEN** fulfills the demands of the heavy metal contents for synthetics in the food industry (recommendation IX of the German Federal Institute for Risk Evaluation) as well as the DIN EN-71 (safety of toys).

Due to the low amount of copper and applied amount of the product, we assume based on our present state of knowledge that fabrics finished with **COLORMATCH PH 451 GRUEN** comply with the requirements of **Öko-Tex Standard 100**.

Because **Öko-Tex Standard 100** refers only to finished textiles we want to mention first, that the products **PRINTPERFEKT STIC SP 2** and **PRINTPERFEKT STIC SP 5** are used for fixing textiles during flocking and printing processes on the flocking and printing machine. The products have no affinity to the fibre. If used properly, relevant residues on the fabric are not to be expected. Thus, **Öko-Tex Standard 100** is not relevant for these products.

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Small amounts of formaldehyde are contained in some products for technical reasons that cannot be avoided:

CHT-Product-name	formaldehyde content
PRINTPERFEKT 226	< 0.007 % (< 70 ppm)
PRINTPERFEKT 226 EC	< 0.009 % (< 90 ppm)
PRINTPERFEKT BLANC 450	< 0.009 % (< 90 ppm)
PRINTPERFEKT BLANC 600	< 0.022 % (< 220 ppm)
PRINTPERFEKT BLANC FLEX	< 0.023 % (< 230 ppm)
PRINTPERFEKT DC 4	< 0.016 % (< 160 ppm)
PRINTPERFEKT DC-AGENT	< 0.005 % (< 50 ppm)
PRINTPERFEKT LAC 70	< 0.021 % (< 210 ppm)
PRINTPERFEKT LAC FLEX	< 0.022 % (< 220 ppm)

The percentage indicated corresponds to the max. formaldehyde values which can occur. The other mentioned products do not contain any formaldehyde.

The products are applied on the fibres. However, the formaldehyde value on finished textiles will be far below the stated formaldehyde values for the products in the table above.

As formaldehyde is a volatile substance, clearly less formaldehyde values can be found on finished textiles than in products themselves. Production parameters can be selected in such a way that the formaldehyde contained in the products can almost be removed from the fabric with customary drying and fixing processes.

Fabrics finished only with **PRINTPERFEKT 226, PRINTPERFEKT 226 EC, PRINTPERFEKT DC 4 and PRINTPERFEKT LAC 70** show a formaldehyde value of < 16 ppm (measuring method LAW 112 or EN ISO 14 184-1), if proper production parameters are kept. Therefore the limit values according to Öko-Tex Standard 100, Product Class I (article for children up to the age of 36 months) can be kept.

Fabrics finished only **PRINTPERFEKT BLANC 450, PRINTPERFEKT BLANC 600, PRINTPERFEKT BLANC FLEX, PRINTPERFEKT DC-AGENT and PRINTPERFEKT LAC FLEX** show a formaldehyde value of < 75 ppm (measuring method LAW 112 or EN ISO 14 184-1), if proper production parameters are kept. Therefore the limit values according to Öko-Tex Standard 100, Product Class II (article in direct contact with skin) can be kept. Under certain conditions, values of < 16 ppm (detection limit) can also be obtained. By washing the fabric or with home laundry, the values can certainly be reduced to < 16 ppm. In this case the limit value according to Öko-Tex Standard 100, Product Class I (article for children up to the age of 36 months) can be kept.

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Despite the estimation based on our experience, we would like to indicate that the formaldehyde content on the fabric strongly depends on the product in use, the processing conditions and the application amount. Thus, an exact content on the fabric can only be determined by measurements on the manufactured fabric.

You can obtain recommendations for the least possible formaldehyde content on the fabric from our Technical Service Department.


For products remaining on the fabric, we recommend to carry out pretrials in terms of emissions of volatile compounds when Product Class IV of Öko-Tex Standard 100 is applied (decoration materials), in case solvents are contained in these products (see safety data sheet).

According to our knowledge we can expect that textiles finished properly with the described CHT products according to our technical recommendations, with the above mentioned exception of **COLORMATCH ME 112 GOLD** with the above mentioned restrictions, meet the Öko-Tex Standard 100.

In case of further questions please contact us at any time.

Sincerely yours,

CHT
R. Beitlich GmbH



T. Gmeiner
(Product Safety)



H. Klett
(Product Safety)