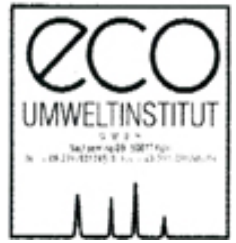


## TEST REPORT No. 12666-39

<b>Description of Sample:</b>	<b>Infinity Cork Floating Plank</b>
Page:	1
Number of pages:	9
Testing parameter:	Emission (test chamber) after 28 days:
	Formaldehyde Phenol Volatile Organic Compounds



Sample geometry: unsealed edges in 1.5 (corresponding to  
relation to area U/A: DIN V ENV 717-1)  
Loading related to: Area  
Sample volume: 30.5 x 20.5 x 1.0 cm

Chamber conditions: according to the standards DIN EN 13419 and DIN EN 717-1

Volume: 0.125 m<sup>3</sup>  
Temperature: 23°C  
Relative Humidity: 45 %  
Pressure: Normal  
Air: Clean  
Air change rate: 1.0 h<sup>-1</sup>  
Loading: 1.0 m<sup>2</sup>/m<sup>3</sup>  
Specific air flow rate: 1 m<sup>3</sup>/m<sup>2</sup>\*h

Air specific emission rate (SER<sub>a</sub>) in  
milligram per square meter per hour.

The concentration value corresponds to  
the area specific emission rate in  
milligram per square meter per hour.

Sampling: 28 days after loading of test chamber



Formaldehyde (chamber)

<b>Substance</b>	<b>Concentration [ppm]</b>	<b>Kork-Logo orientation value [ppm]</b>
Formaldehyde	< 0.01	0.05

< = not detectable, below detection limit

Detection limit: 0.01 ppm

Test method: DIN V ENV 717-1 with following deviations:

1. The documented value of the formaldehyde emission is a single result at the documented sampling time. The proceeded test does not focus on a qualification according to the German "Chemical Prohibition Regulation (Chem VV)", therefore it does not display the equilibrium according to EN 717-1.
2. VDI-guideline 3484 (Sheet 1; Fairs of Aldenhyden - determining the formaldehyde concentration according to the sulfite Pararosaniilin procedure)
3. test chamber volume see volume (chamber conditions)
4. only one test specimen, no double determination

Phenol (chamber)

<b>Substance</b>	<b>Concentration [mg/m<sup>3</sup>]</b>	<b>Kork-Logo orientation value [ppm]</b>
Phenol	< 0.001	0.04

< = not detectable, below detection limit

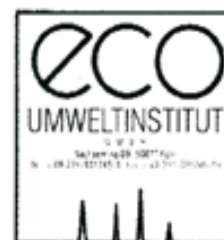
Detection limit: 0.0001 mg/m<sup>3</sup>

Test method: DIN ISO 16000-6

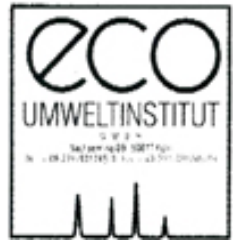


## Volatile organic compounds (VOC, test chamber)

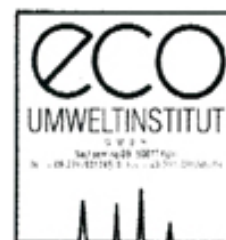
<b>Substance/-group</b> <b>Aromatic Hydrocarbons</b>	<b>Concentration</b> <b>[mg/m<sup>3</sup>]</b>	<b>SER<sub>a</sub></b> <b>[mg/m<sup>2</sup>h]</b>
Benzene	< 0.001	< 0.001
Toluene	< 0.001	< 0.001
Ethylbenzene	< 0.001	< 0.001
m/p-Xylene	< 0.001	< 0.001
o-Xylene	< 0.001	< 0.001
2-Ethyltoluene	< 0.001	< 0.001
3-Ethyltoluene	< 0.001	< 0.001
4-Ethyltoluene	< 0.001	< 0.001
n-Propylbenzene	< 0.001	< 0.001
Iso-Propylbenzene	< 0.001	< 0.001
1,2,4-Trimethylbenzene	< 0.001	< 0.001
1,3,5-Trimethylbenzene	< 0.001	< 0.001
1,2,3-Trimethylbenzene	< 0.001	< 0.001
Sum Diethylbenzene	< 0.001	< 0.001
1,2,4,5-Tetramethylbenzene	< 0.001	< 0.001
1,2,3,5-Tetramethylbenzene	< 0.001	< 0.001
1,2,3,4-Tetramethylbenzene	< 0.001	< 0.001
1,3-Diisopropylbenzene	< 0.001	< 0.001
1,4-Diisopropylbenzene	< 0.001	< 0.001
p-Cymene	< 0.001	< 0.001
Butylbenzene	< 0.001	< 0.001
Heptylbenzene	< 0.001	< 0.001
Octylbenzene	< 0.001	< 0.001
Nonylbenzene	< 0.001	< 0.001
Decylbenzene	< 0.001	< 0.001
Undecylbenzene	< 0.001	< 0.001
Naphthalene	< 0.001	< 0.001
1-Methylnaphthalene	< 0.001	< 0.001
2-Methylnaphthalene	< 0.001	< 0.001
Chlornaphthalene	< 0.001	< 0.001
Styrene	< 0.001	< 0.001
Alpha-Methylstyrene	< 0.001	< 0.001
Σ m,o,p-Methylstyrene	< 0.001	< 0.001
4-Phenyl-1-Cyclohexene	< 0.001	< 0.001
Phenylacetylen	< 0.001	< 0.001
Indene	< 0.001	< 0.001



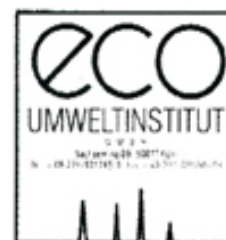
<b>Substance/-group</b>	<b>Concentration [mg/m<sup>3</sup>]</b>	<b>SER<sub>a</sub> [mg/m<sup>2</sup>h]</b>
<b>Aliphatic Hydrocarbons</b>		
Iso-Octane	< 0.001	< 0.001
n-Hexane	< 0.001	< 0.001
n-Heptane	< 0.001	< 0.001
n-Octane	< 0.001	< 0.001
n-Nonane	< 0.001	< 0.001
n-Dacane	0.003	0.003
n-Undecane	0.004	0.004
n-Dodecane	< 0.001	< 0.001
n-Tridenace	< 0.001	< 0.001
n-Tetradecane	< 0.001	< 0.001
n-Pentadecane	< 0.001	< 0.001
n-Hexadecane	< 0.001	< 0.001
2-Methylpentane	< 0.001	< 0.001
3-Methylpentane	< 0.001	< 0.001
Methylcyclopentane	< 0.001	< 0.001
Cyclohexane	< 0.001	< 0.001
Methylcyclohexane	< 0.001	< 0.001
1-Hexene	< 0.001	< 0.001
1-Octene	< 0.001	< 0.001
1-Decene	< 0.001	< 0.001
2,4,4-Trimethyl-1-pentene	< 0.001	< 0.001
4-Vinylcyclohexene	< 0.001	< 0.001
Dimethylcyclohexene	< 0.001	< 0.001
Tert.-Butylcyclohexane	< 0.001	< 0.001
<b>Terpenes</b>		
α-Pinene	< 0.001	< 0.001
β-Pinene	< 0.001	< 0.001
δ-3-Carene	< 0.001	< 0.001
Limonene	< 0.001	< 0.001
α-Terpinene	< 0.001	< 0.001
Borneol	< 0.001	< 0.001
TR.-Caryophyllene	< 0.001	< 0.001
Terpeniol	< 0.001	< 0.001
<b>Alcohols</b>		
2-Propanol	< 0.001	< 0.001
1-Butanol	< 0.001	< 0.001
2-Ethyl-1-hexanol	< 0.001	< 0.001
Terpineol	< 0.001	< 0.001



<b>Substance/-group</b>	<b>Concentration</b> <b>[mg/m<sup>3</sup>]</b>	<b>SER<sub>a</sub></b> <b>[mg/m<sup>2</sup>h]</b>
<b>Glycols</b>		
Ethylene glycol	< 0.001	< 0.001
Diethylene glycol	< 0.001	< 0.001
1,2-Propandiol	0.002	0.002
1,3-Propandiol	< 0.001	< 0.001
2-Methoxythanol	< 0.001	< 0.001
2-Ethoxythanol	< 0.001	< 0.001
2-Butoxythanol	0.035	0.035
1-Methoxy-2-propanol	< 0.001	< 0.001
2-Butoxyethoxyethanol	< 0.001	< 0.001
2-Phenoxyethanol	< 0.001	< 0.001
1-Butoxy-2-propanol	< 0.001	< 0.001
2-Ethoxyethylacetate	< 0.001	< 0.001
2-Ethoxyethoxyethanol	< 0.001	< 0.001
2-Methyl-2,4-pentandiol	< 0.001	< 0.001
Isopropoxyethanol	< 0.001	< 0.001
2-Ethoxyethylether	< 0.001	< 0.001
2-(2-Methoxy-ethoxy)ethanol	< 0.001	< 0.001
3-Ethoxy-1-propanol	< 0.001	< 0.001
Diethylenglykolhexylether	< 0.001	< 0.001
Diethylenglykolmethylether	< 0.001	< 0.001
2-Methoxyethylacetate	< 0.001	< 0.001
2-Ethoxyethylacetate	< 0.001	< 0.001
2-Butoxyethylacetate	< 0.001	< 0.001
1-Methoxy-2-propanolacetate	< 0.001	< 0.001
2-Butoxyethoxyethyl-acetate	0.002	0.002
<b>Aldehydes</b>		
n-Butanal	< 0.001	< 0.001
n-Pentanal	< 0.001	< 0.001
n-Hexanal	< 0.001	< 0.001
n-Heptanal	< 0.001	< 0.001
n-Oktanal	< 0.001	< 0.001
n-Nonanal	0.002	0.002
n-Dekanal	0.003	0.003
n-Butenal	< 0.001	< 0.001
n-Pentenal	< 0.001	< 0.001
n-Hexenal	< 0.001	< 0.001
n-Heptenal	< 0.001	< 0.001
n-Octenal	< 0.001	< 0.001
n-Nonenal	< 0.001	< 0.001
n-Decenal	< 0.001	< 0.001
n-Undecenal	< 0.001	< 0.001
Benzaldehyde	< 0.001	< 0.001
2,5-Dimethylbenzaldehyde	< 0.001	< 0.001
Glutardialdehyde	< 0.001	< 0.001
Furfurol	< 0.001	< 0.001
5-Methylfurfural	< 0.001	< 0.001



<b>Substance/-group</b>	<b>Concentration</b> <b>[mg/m<sup>3</sup>]</b>	<b>SER<sub>a</sub></b> <b>[mg/m<sup>2</sup>h]</b>
<b>Ketones</b>		
Methylethylketone	< 0.001	< 0.001
Methylisobutylketone	< 0.001	< 0.001
2-Pentanone	< 0.001	< 0.001
Cyclohexanone	< 0.001	< 0.001
4-Methylcyclohexanone	< 0.001	< 0.001
Diisopropylketone	< 0.001	< 0.001
Acetophenone	< 0.001	< 0.001
Benzophenone	< 0.001	< 0.001
<b>Acids</b>		
Hexanoic acid	< 0.001	< 0.001
2-Ethylhexanoic acid	< 0.001	< 0.001
<b>Esters</b>		
Methylacetate	< 0.001	< 0.001
Ethylacetate	< 0.001	< 0.001
Butylacetate	< 0.001	< 0.001
Isobutylacetate	< 0.001	< 0.001
3-Methylbutylacetate	< 0.001	< 0.001
Vinylacetate	< 0.001	< 0.001
Methyldecanoat	< 0.001	< 0.001
<b>Phenols</b>		
4-Chloro-3-methyl-phenol	< 0.001	< 0.001
o-Cresole	< 0.001	< 0.001
m,p-Cresole	< 0.001	< 0.001
<b>Halocarbons</b>		
cis-1,2-Dichlorethene	< 0.001	< 0.001
trans-1,2-Dichlorethene	< 0.001	< 0.001
Trichlorethene	< 0.001	< 0.001
Tetrachlorethene	< 0.001	< 0.001
1,1,1-Trichlorethene	< 0.001	< 0.001
1,4-Dichlorbenzene	< 0.001	< 0.001
Trichlormethane	< 0.001	< 0.001
Tetrachlormethene	< 0.001	< 0.001
1,2-Dichlorbenzene	< 0.001	< 0.001
1,3-Dichlorbenzene	< 0.001	< 0.001
1,2,3-Trichlorbenzene	< 0.001	< 0.001
1,2,4-Trichlorbenzene	< 0.001	< 0.001
1,3,5-Trichlorbenzene	< 0.001	< 0.001
1,2,3,5-Tetrachlorbenzene	< 0.001	< 0.001
1,2,4,5-Tetrachlorbenzene	< 0.001	< 0.001



<b>Substance/-group</b>	<b>Concentration</b> <b>[mg/m<sup>3</sup>]</b>	<b>SER<sub>a</sub></b> <b>[mg/m<sup>2</sup>h]</b>
<b>Phthalates</b>		
DMP	< 0.001	< 0.001
DEP	< 0.001	< 0.001
DPP	< 0.001	< 0.001
DnBP	< 0.001	< 0.001
DiBP	0.001	0.001
<b>Acrylates</b>		
Ethylacrylate	< 0.001	< 0.001
Methylacrylate	< 0.001	< 0.001
n-Butylacrylate	< 0.001	< 0.001
Isobutyl-methacrylate	< 0.001	< 0.001
t-Butylacrylate	< 0.001	< 0.001
Methyl-methacrylate	< 0.001	< 0.001
Butyl-methacrylate	< 0.001	< 0.001
2-Ethylhexylacrylate	< 0.001	< 0.001
Glycid-methacrylate	< 0.001	< 0.001
1,6-Hexadioldiacrylate	< 0.001	< 0.001
<b>Siloxane</b>		
Hexamethylcyclotrisiloxane	< 0.001	< 0.001
Octamethylcyclotrisiloxane	< 0.001	< 0.001
Decamethylcyclotrisiloxane	< 0.001	< 0.001
<b>Other calibrated VOC</b>		
TXIC ® <sup>1</sup>	< 0.001	< 0.001
Texanol ®	< 0.001	< 0.001
2-Pentylfuran	< 0.001	< 0.001
THF	< 0.001	< 0.001
Aniline	< 0.001	< 0.001
DMF	< 0.001	< 0.001
1-ME-2-pyrrolidone	0.001	0.001
Benzothiazene	< 0.001	< 0.001
BHT	< 0.001	< 0.001
Total calibrated VOC:	<b>0.053</b>	<b>0.053</b>
<b>Other non-calibrated VOC, quantified as toluene-equivalent</b>		
Two glycoethers, total	0.110	0.110
Two glycoethers, total	0.013	0.013
	0.002	0.002
Total non-calibrated VOC:	<b>0.125</b>	<b>0.125</b>
Total VOC:	<b>0.178</b>	<b>0.178</b>
<b>Kork-Logo-orientation value</b>	<b>0.2</b>	<b>0.2</b>

<sup>1 1</sup> TXIB ® = 2,2,4-teimethyl-1,3-pentandiol diisobutylrat



<b>Substance/-group Esters</b>	<b>Concentration [mg/m<sup>3</sup>]</b>	<b>SER<sub>a</sub> [mg/m<sup>2</sup>h]</b>
Succinicaciddimethylester	< 0.001	< 0.001
Glutaricaciddimethylester	< 0.001	< 0.001
Adipicaciddimethylester	0.001	0.001
<b>Total:</b>	< 0.001	< 0.001

< = not detectable, below detection limit

Detection limit: 0.001 mg/m<sup>3</sup>  $\cong$  1 µg/m<sup>3</sup>

Test method: DIN ISO 16000-6

Cologne, 17.1.2005

Dr. H.-U. Krieg  
(Laboratory Manager)

### Assessment of the results

The tested sample fulfills the criteria of the Kork-Logo to the above mentioned range.

Cologne, 17.1.2005

Dr. Frank Keubart  
(Project Manager)