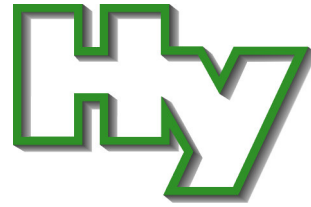


Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie

Director: Prof. Dr.rer.nat. Lothar Dunemann

Legal Entity: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V.



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Our reference: W-335514e-20-Ho
Contact person: Dipl.-Ing. (FH) S. Horn

Gelsenkirchen, 02.11.2020

TEST REPORT

Test of the microbial metabolisation pursuant to DIN EN ISO 846 (08/2019), method C

Client:	D. Ellinas Factory Products Ltd 14 Demokratias, Moutayiaka 4527 Limassol
Ordering Date:	Written order on 03.08.2020
Test material:	“Dellinas PVC Foam white No 1”
Description of the test objects:	Dark-grey plastic plates
Size of the test objects:	5 cm x 5 cm x 1,2 cm
Date of receipt of test samples:	16.09.2020
Commencement of tests:	24.09.2020
Case handler:	Dipl.-Ing. (FH) S. Horn
Our reference:	W-335514e-20-Ho
Scope of the report:	3 pages

Our general terms and conditions apply (<http://www.hyg.de>). The validity of our test report assumes a coexisting quality of the test material, product composition and processing.

The certificate shall not be reproduced, except in full, without written approval of the Institute.

Legal Entity: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V., **Register:** VR 519 Local Court Gelsenkirchen (Germany); **VAT ID:** DE125018356 **Directorate:** Prof. Dr. Jürgen Kretschmann (Head), Dr. Emanuel Grün, Dr. Dirk Waider, Joachim Löchte, Prof. Dr. Lothar Dunemann (Executive Member).



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1. Implementation

Testing was performed pursuant to DIN EN ISO 846 „Evaluation of the effect of microorganisms on synthetic materials“, method C. The evaluation was carried out by visual assessment.

Method C is suitable to assess the resistance of plastic to bacterial attack in absence of organic contaminants.

The specimens were disinfected before the test with an ethanol-water mixture (mass ratio 70:30).

Preparation of a bacteria suspension with the following test strain:

Pseudomonas aeruginosa DSM 1253

Blending of the bacteria suspension with a carbon-free or low-carbon culture medium which was liquefied and cooled down to 45°C,

Filling the Petri dishes with the inoculated agar,

Placing the specimens onto the cooled agar and then dousing the specimens with the inoculated agar (approx. 1mm cover layer on the specimens) (5 parallel sets),

In addition, three test specimens made of stainless steel are also inoculated and incubated as a negative control,

There is also a batch of 2 parallel sterile samples, onto each of which 3 ml of ethanol-water mixture with a mass ratio of 70:30 is pipetted.

Incubation of test specimens over a period of 4 weeks at a steady temperature of $29 \pm 1^\circ\text{C}$ and a relative humidity of $> 95\%$.

Visual inspection of the test specimens with the naked eye as well as with a stereoscopic microscope (at 50 x magnification) for bacterial growth after 4 weeks followed by an evaluation of the growth in comparison to the control samples.

2. Assessment

The microbial growth on the test specimens was evaluated pursuant to Table 1

Table 1: Evaluation of the microbial growth (adapted according to method A, DIN EN ISO 846)

Intensity of growth	Rating
0	No growth visible when viewed microscopically.
1	No growth with the naked eye, but clearly visible under the microscope.
2	Growth visible to the naked eye.
3	Strong growth, visible to the naked eye.

3. Results

Table 2: Test results

Examination material	Growth intensity of the microbial growth according to table 1
„Dellinas PVC Foam white No 1“	0
	0
	0
	0
	0

None of the five specimen pursuant to method C showed bacterial growth when viewed microscopically.

Gelsenkirchen, 2nd of November 2020

The Director of the Institute
p.p.



(Dipl.-Ing. (FH) S. Horn)
Head of department
Hygienic Building Technology