
Technical Service Report No. 65744

PPG Deco Czech a.s., Brasy (CZ)



Samples received on December 04th, 2020:

1. Primalex BACTERIA RESIST (Blank)
2. Primalex BACTERIA RESIST

Objective

- pH-value-Measurement
- Sterility test
- ASTM E 2180 -18

Examination

Sterility test

Immediately upon receipt the sterility of the samples was checked by using Thor Test Method D 700.

ASTM E 2180 -18

In order to check an antibacterial effect, the sample was applied on a suitable carrier material and coated with agar slurry, which contains the test species *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Klebsiella pneumoniae* resp. *Enterococcus sp.* The bacterial count was checked 24 h later. The decrease in comparison to the initial cell count gives an indication about the antibacterial effect.

Results

Tests were started on 11.12.2020 and finished on 12.02.2021.

pH-value-Measurement

The measured pH-values are enclosed in tabular form.
The measurement was effected by random sampling.

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Sterility test

Sample "Primalex BACTERIA RESIST (Blank)" showed only minimum growth spore-forming bacteria.

Raw materials are often contaminated with spore-forming bacteria, which get transferred to the final products. These rod-shaped, gram-positive bacteria create endospores under unfavourable conditions.

Spore-forming bacteria are in general difficult kill. In the presence of biocides, however, they cannot germinate.

If spores are transferred to optimal, biocide-free nutrient (agar plate) they germinate and produce vegetative cells. Such reproduction in the final product itself is, however, not possible in the presence of preservatives.

The other sample was free of viable micro-organisms.

ASTM E 2180 -18

The sample showed a reduction from 99,55 % to 100 %.

Detailed results of the single samples are listed in the enclosed tables.

Control of Technical Service Report

Die Prüfungen in diesem Bericht wurden gemäß den aktuellen Thor Standardtestmethoden durchgeführt. Alle Ergebnisse wurden vom zuständigen Anwendungstechniker auf ihre Vollständigkeit und Richtigkeit geprüft.

14.02.2022-BAR


Anwendungstechniker
(D. Krapp)

Please note that unless otherwise stated, the conclusions and any recommendations, either made or implied, are based on information drawn from examination of the samples identified in this report only. Since these may be influenced by, for example, infection level variations in raw materials, stored component solutions and manufacturing equipment, it is recommended that some appropriate monitoring of microbiological properties be carried out.

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pH- & Redox Measurement and Sterility Test

Designation of sample	pH-value	Redox [mV]	Bacteria	Yeasts	Mould Fungi
			aerobic		
Primalex BACTERIA RESIST (Blank)			1*	0	0
Primalex BACTERIA RESIST	8.2		0	0	0

n.m. = not measurable

n.t. not tested

° bacterial growth only on Sabouraud-Agar

* spore-forming bacteria

** amongst others spore-forming bacteria

ASTM E 2180 -18

Inoculum 10^6 CFU/ml

Designation of sample	<i>Staphylococcus aureus</i>			<i>Pseudomonas aeruginosa</i>			<i>Escherichia coli</i>			<i>Klebsiella pneumoniae</i>			<i>Enterococcus sp.</i>		
	CFU/ml	antimicrobial reduction [%]	antimicrobial activity [R]	CFU/ml	antimicrobial reduction [%]	antimicrobial activity [R]	CFU/ml	antimicrobial reduction [%]	antimicrobial activity [R]	CFU/ml	antimicrobial reduction [%]	antimicrobial activity [R]	CFU/ml	antimicrobial reduction [%]	antimicrobial activity [R]
Primalex BACTERIA RESIST (Blank) 0h	3,2E+07			7,7E+06			1,7E+06			1,3E+06			1,1E+06		
Primalex BACTERIA RESIST (Blank) 24h	2,9E+07			4,6E+08			5,5E+05			9,0E+02			7,1E+05		
Primalex BACTERIA RESIST	1,0E+00	100,00	7,5	1,0E+00	100,00	8,7	1,0E+00	100,00	5,7	1,0E+00	99,89	3,0	3,2E+03	99,55	2,3

The product should ideally have an antimicrobial activity of $R \geq 2$.

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