concept

Report: BER_2592-01

Report

Initial test of the concrete admixture TOPTEC®

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Quality Control

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TOPTEC®
complies with the regulations of EN 934-1:2008 (D) Table 1
and EN 934-2:2009+A.1:2012 Table 9
and meets the requirements for CE marking according to Annex ZA of EN 934-2:2009+A.1:2012

The test results are summarised on the following pages.

Initial test of the concrete admixture TOPTEC®

1. GENERAL INFORMATION

TOPTEC® is a watery solution of a silane.

Intended usage	sealing agent (DM)
Recommended dosage range	0.2 – 0.60 M.-% of cement weight
Area of application	Concrete, reinforced concrete, pre-stressed concrete

The concrete admixture is manufactured under factory production control and tested according to EN 934-1, Table 1 and EN 934-2 Table 9.

The concrete admixture contains only active substances, which are listed in the list of recognized substances A.1 of EN 934-1: 2008 (D), thus eliminating a corrosion test.

Tests were carried out with the batch number 05/20, date of manufacturing 09.07.2020.

2. TEST RESULTS

- **General properties**

Property	Test procedure	EXPECTED value	ACTUAL value
Homogeneity	By appearance (SOP02; V1)	No sedimentation, no bleeding	No sedimentation, separation or similar
Colour	By appearance (SOP03; V1)	white	milky
Effective component	EN 480-6	-	See Appendix
Relative density in g/cm³	ISO 758	0,96 ± 0,02	0,9800
Solid content in M.-%	ASTM D5098-91	24 ± 1,2	24,7
pH value	ISO 4316	8,0 ± 1,0	8,0
Total chlorine in M.-%	ISO 14852	< 0,10	< 0,01
Water-soluble chloride content (Cl^-) in M.-%	EN 480-10	< 0,10	< 0,01
Alkali content (Na_2O equivalent) in M.-%	EN 480-12	< 1,0	0,01
Corrosion behaviour	EN 480-14	-	A.1

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- **Additional requirements according to EN 934-2 table 9**

Concrete inspections with identical water/cement ratio, Dosage 0.6 M.-%

Property	Reference concrete	Test mixture	Values	Requirements
Water requirement in kg/m³	192	192		~
Capillary water absorption after 7 days in g / mm² (mortar)	0,0043	0,00103		~
Capillary water absorption after 7 days in % (mortar)	100	24,03	24	With test mixture ≤ 50 % compared to check mixture
Capillary water absorption after 90 days in g / mm² (mortar)	0,0133	0,0058		~
Capillary water absorption after 90 days in % (mortar)	100	43,6	44	With test mixture ≤ 60 % compared to check mixture
Compressive strength after 28 days N/mm² (type I)	51,2	47,3		~
Compressive strength after 28 days in % (type I)	100	92,4	92	Test mixture ≥ 85 % of the check mixture
Air content in fresh concrete in vol. % (type I)	1,8	2,4	0,6	Test mixture ≤ 2% volume share over the check mixture.

Remark: ~ - no requirement

3. APPENDICES

IR spectrum

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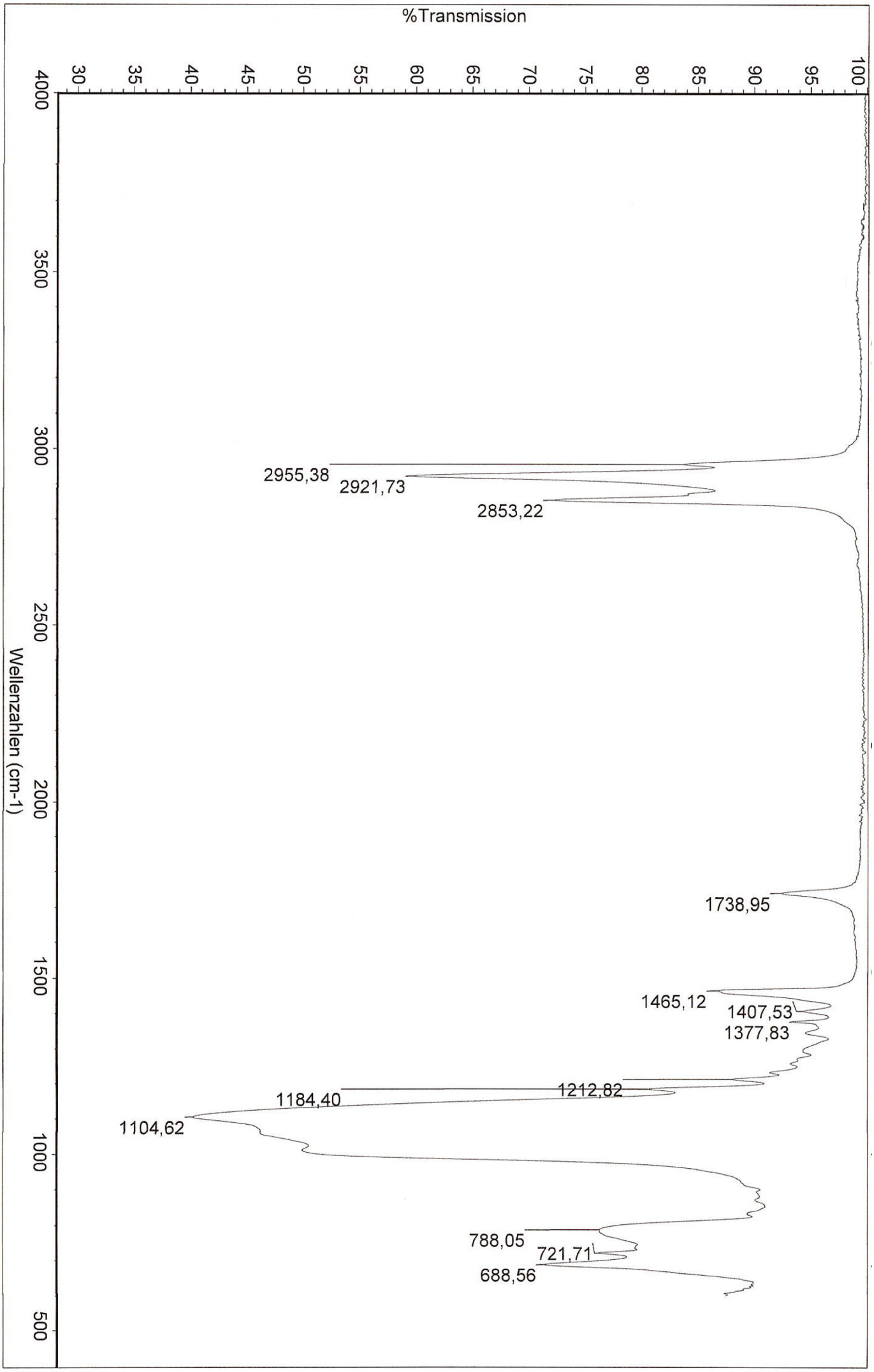
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2000
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1000
500
Wellenzahlen (cm-1)
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2921,73
2853,22
1738,95
1465,12
1407,53
1377,83
1212,82
1184,40
1104,62
788,05
721,71
688,56