

TESTS FOR CERTIFICATE „DECLARATION OF CONFORMITY – TESTED FOR HARMFUL SUBSTANCES“

RETANOL® 511



Manufacturer: PCT Performance Chemicals GmbH
Product: Retanol® 511
Test: Screed. The test sample was placed in an emission test chamber.
Test date: April 2012

NO.	TEST	REQUIREMENTS	TEST RESULT	REMARK
1.1	Formaldehyde emissions	0,01 ppm after 28 days (Chemicals Prohibition Ordinance (ChemVerbotsV): 0.1 ppm)	< 0,005 ppm (nach 6 Tagen)	Requirement fulfilled
1.2	Emission of volatile organic compounds (VOC)	VOC after max. 28 days: VOC with boiling point 50 – 250 °C: ≤ 100 µg/m ³ VOC with boiling point > 250 °C: ≤ 50 µg/m ³ Total of all VOC (TVOC) including non-identified VOC: ≤ 150 µg/m ³	7,7 µg/m ³ < 1,0 µg/m ³ 7,7 µg/m ³	Requirement fulfilled
2	Odour emissions	max. grade 3: clearly perceptible odour, but not disturbing (mean value) after max. 28 days	2,5 (10 test persons, after 6 days)	Requirement fulfilled
3	Water-soluble components (eluate according to DIN 38414-S4)			
	pH value	6,0 – 12,5	12,5 after CO ₂ treatment: 11,8	Requirement fulfilled
	Conductivity	3.000 µS/cm	6.050 µS/cm* after CO ₂ treatment: 2.740 µS/cm*	Requirement fulfilled
	TOC	20 mg/l	4,7 mg/l	Requirement fulfilled
	AOX	0,1 mg/l	< 0,01 mg/l	Requirement fulfilled
	Phenol index	50 µg/l	< 10,0 µg/l	Requirement fulfilled
	Chloride	125 mg/l	1,5 mg/l	Requirement fulfilled
	Sulphate	250 mg/l	11,0 mg/l	Requirement fulfilled
	Cyanide (sat.)	50 µg/l	< 1,0 µg/l	Requirement fulfilled
	Arsenic	50 µg/l	< 1,0 µg/l	Requirement fulfilled
	Lead	100 µg/l	< 1,0 µg/l	Requirement fulfilled
	Cadmium	5 µg/l	< 0,1 µg/l	Requirement fulfilled
	Chrome (sat.)	100 µg/l	7,3 µg/l	Requirement fulfilled
	Chrome (VI)	25 µg/l	< 1,0 µg/l	Requirement fulfilled
	Copper	150 µg/l	41,3 µg/l	Requirement fulfilled
	Nickel	150 µg/l	1,7 µg/l	Requirement fulfilled
	Mercury	1 µg/l	< 0,1 µg/l	Requirement fulfilled
	Thallium	3 µg/l	< 1,0 µg/l	Requirement fulfilled
	Zinc	300 µg/l	2,6 µg/l	Requirement fulfilled

*The pH value of cement- and lime-based construction materials decreases over the years due to the impact of carbon dioxide (carbonation). To ensure sustainable recycling at a later point of time, the eluate of such construction materials is treated with CO₂ until a pH value of approx. 11.5 is obtained. Afterwards the conductivity is measured again.

Summary: All requirements have been met.