

Table 21 — Environmental protection recommendations (test values for the soil and groundwater complex) and tests on the bound resilient supporting layer, shockpads and synthetic turf surfaces (including infill material for the pile layer)

Column	1	2	3	
Row	Parameter (extract / eluate)	Recommendations	Test	
			Extraction / elution according to	Analytical method
1	DOC (dissolved organically bound carbon)	$\leq 50 \text{ mg/l}^a$ $\leq 100 \text{ mg/l}^a$	7.8.2 and 7.8.3	7.8.5
2	EOX (extractible organic halides)	$\leq 100 \text{ mg/kg}$	7.8.4.2	7.8.4.3
3	Lead (Pb)	$\leq 0,025 \text{ mg/l}$	7.8.2	7.8.6
4	Cadmium (Cd)	$\leq 0,005 \text{ mg/l}$	7.8.2	7.8.6
5	Total chromium (Cr) content	$\leq 0,05 \text{ mg/l}$	7.8.2	7.8.6
6	Chromium VI (CrVI)	$\leq 0,008 \text{ mg/l}^b$	7.8.2	7.8.6
7	Mercury (Hg)	$\leq 0,001 \text{ mg/l}$	7.8.2	7.8.6
8	Zinc (Zn)	$\leq 0,5 \text{ mg/l}^c$	7.8.2 and 7.8.3	7.8.6
9	Tin (Sn)	$\leq 0,04 \text{ mg/l}$	7.8.2	7.8.6
10	Odour	to be described verbally		
11	Surface appearance	to be described verbally		
12	Chlorinated paraffin	to be determined ^d	7.8.7.1 and 7.8.7.2	7.8.7.1 and 7.8.7.2
13	Phthalate	to be determined ^d	7.8.8	7.8.8

^a Materials with a DOC content of more than 100 mg/l in an aqueous 24-h eluate (prepared according to 7.8.2) fail to meet these requirements (K.O. criterion). In cases where the DOC concentration in the 24-h eluate is in the range of > 50 mg/l to 100 mg/l, the limits stated for the 50 mg/l criterion for DOC in the 48-h eluate (prepared according to 7.8.3) can be used to assess conformity.

^b Since the standardized spectrophotometry method (see DIN 38405-24) or ion chromatography (see DIN EN ISO 10304-3) can only determine Cr(VI) concentrations of $\geq 0,05 \text{ mg/l}$, only samples with total Cr contents of $\leq 0,008 \text{ mg/l}$ meet this requirement. If this is not the case, proof that the Cr(VI) concentrations are $\leq 0,008 \text{ mg/l}$ shall be provided by means of another, non-standardized method.

^c Elastic infill materials with zinc content of more than 1 mg/l in an aqueous 24-h eluate (prepared according to 7.8.2) fail to meet these requirements (a K.O. criterion). In cases where the zinc concentration in the 24-h eluate of elastic infill materials is in the range of > 0,5 mg/l to 1 mg/l, the limits stated for the 0,5 mg/l criterion for zinc in the 48-h eluate (prepared according to 7.8.3) can be used to assess conformity.

^d Only the bound resilient supporting layer, the shockpads and freshly-produced recycled rubber which is not produced from used tyres shall be tested when being used as infill material for the pile layer. Currently, no limit values for chlorated paraffins and phthalates are specified. Concentration values shall be determined and recorded to gather experience with the materials.