

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/prescribed number of samples form standard
<b>1</b>	<b>Analysis of clay, additives and solutions</b>		
	<b>General: Sample preparation and removal contribution (per sample)</b>		
<b>1.1.</b>	<b>Physical analyses</b>		
1.1.1.	Moisture content and/or density	Own method TCKI	3 weekdays 150 g
1.1.2.	Particle size distribution		
	• Clay analysis: Loam, course sand, fine sand (<10, 63-250 resp. >250 µm)	Own method TCKI	1 weekday 150 g
	• < 2 µm	Own method TCKI	2 weeks 150 g
	• < 16 µm	Own method TCKI	2 weeks 150 g
	• < 45 en < 125 µm	Own method TCKI	2 weeks 150 g
	• Total granular (2, 10, 16, 45, 63, 125, 250 µm)	Own method TCKI	2 weeks 500 g
	• Granular-curve (laser diffraction)	Own method TCKI	2 weeks 150 g
	• Sieve analysis, 8 fractions (0.045 - 4 mm)	Own method TCKI	1 week 500 g
	• Particale size distribution sand gutter material, 6 fractions (1 to 5.6 mm)	Own method TCKI	1 week 500 g
1.1.3.	Seperation of solid particles	Own method TCKI	2 weeks 3000 g
1.1.4.	Separation of heavy minerals (for iron ore analysis)	Own method TCKI	2 weeks 1000 g
1.1.5.	Specific surface area	Own method TCKI	3 weeks 100 g
1.1.6.	Specific surface according to Blaine, including pycnometer density	EN 196-6	2 weeks 100 g
1.1.7.	Pore size distribution (Mercury porosimetry)	DIN 66133	2 weeks 100 g
1.1.8.	Consistency stability according Pfefferkorn	Own method TCKI	2 weeks 1000 g
1.1.9.	Plasticity index according to Atterberg	Std. RAW determinations: test 14	3 weeks 1000 g
1.1.10.	Moisture conductivity coefficient (k-value)	Own method TCKI	3 weeks 1000 g

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
1.1.11. Total porosity (hydrostatic weighing)	Own method TCKI	3 weeks	250 g
1.1.12.a Determination of the viscosity (reference measurement)	Own method TCKI	3 weeks	3 l
1.1.12.b Determination of the viscosity (repeat measurement)	Own method TCKI	2 weeks	1.5 l
<b>1.2. Chemical analysis</b>			
1.2.1. Iron and calcium (XRF), digestion included	Own method TCKI	1 weekday	100 g
1.2.2. Barium, calcium, chromium, iron, manganese and titanium, (XRF), digestion included	Own method TCKI	1 weekday	100 g
1.2.3. Loss on ignition, 1025 °C	Own method TCKI	2 weeks	100 g
1.2.4. Chemical composition Al, Ba, Ca, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Sr, Ti, V, Zn and Zr (XRF), loss on ignition 1025 °C and digestion included	Own method TCKI	1 week	100 g
1.2.5. Element scan X-ray fluorescence	Own method TCKI	1 week	-
1.2.6. Small spot Analysis (XRF)	Own method TCKI	1 week	-
1.2.7. Reduced iron (Fe <sup>2+</sup> ) and total iron in solids (spectrophotometry), digestion included	ISO 14719, method A	2 weeks	100 g
1.2.8. Electron microscopy-element scan (SEM, EDX)	-	2 weeks	-
1.2.9. Leaching: Shaken test for water soluble salts in dried clay (element determinations excluded)	Own method TCKI	1 week	250 g
1.2.10.a Package water-soluble salts; Ca, K, Na, Mg, SO <sub>4</sub> and electrical conductivity of the eluate, preparation excluded (ICP-OES and potentiometry)	NEN 6966, ISO 7888	2 weeks	250 g
1.2.10.b Water-soluble SO <sub>4</sub> , (ICP-OES), preparation excluded	NEN 6966	2 weeks	250 g

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
1.2.11.a Elemental analysis ICP-MS (per element: As, Ba, Ca, Cd, Co, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Sn, V, Zn)	AP04-E (various numbers)	3 weeks	100 g/100 ml
1.2.11.b Element analysis AP04-package (Hg excluded) (As, Ba, Br, Cd, Cl, Co, Cr, Cu, F, Mo, Ni, Pb, Sb, Se, Sn, V, Zn, SO <sub>4</sub> , pH, conduction)	AP-04E (various numbers)	3 weeks	200 ml
1.2.12. Elemental analysis ICP-OES	NEN 6966	2 weeks	100 g/100 ml
1.2.13 Microwave digestion	Own method TCKI	1 week	100 g
1.2.14. Digestion with aqua regia	Own method TCKI	1 week	200 g/100 ml
1.2.15.a Sulphur in clay or fired material (ICP-OES), digestion included	Own method TCKI	1 week	100 g/100 ml
1.2.15.b Sulphur (ICP-OES) digestion excluded	Own method TCKI	1 week	100 ml
1.2.16.a Fluorine (potentiometry ISE), AP04	AP-04-E-XVIII and NEN 6578	2 weeks	100 ml
1.2.16.b Fluorine (potentiometry ISE), wash bottles	ISO 15713, equivalent to ISO 15713 (H <sub>2</sub> O <sub>2</sub> )	2 weeks	100 ml
1.2.17. Fluorine in raw materials or ceramics, digestion included (potentiometry ISE)	Own method TCKI	2 weeks	100 g
1.2.18. CaO-bound CO <sub>2</sub> (Volumetry)	Own method TCKI	1 week	100 g
1.2.19. Organic Carbon (Infra red)	Own method TCKI	1 weekday	100 g
1.2.20. Total Carbon (Infra red)	Own method TCKI	2 weekdays	100 g
1.2.21.a Electrical conductivity of an eluate (potentiometry)	ISO 7888	1 week	100 ml
1.2.21.b pH of an aqueous solution (potentiometry)	EN-ISO 10523	1 week	200 ml
1.2.21.c Combination of pH and the electrical conductivity of a liquid (diffusion test)	ISO 7888, EN-ISO 10523, AP04-U-IV and AP04-U-V	1 week	200 ml

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
1.2.22. SO <sub>4</sub> <sup>2-</sup> (ion-chromatography)	AP04-E-XVII	2 weeks	100 ml
1.2.23. Cl <sup>-</sup> (ion-chromatography)	EN-ISO 10304, AP04-E-XVII, EN 1911, equivalent to EN 1911 (NaOH)	3 weeks	100 ml
1.2.24.a NO <sub>3</sub> <sup>-</sup> (ion-chromatography)	Own method TCKI	1 week	100 ml
1.2.24.b PO <sub>4</sub> <sup>3-</sup> (ion-chromatography)	Own method TCKI	3 weeks	100 ml
1.2.25. Cr <sup>6+</sup> (ion-chromatography)	Own method TCKI	1 week	100 ml
1.2.26. Br <sup>-</sup> (ion-chromatography)	EN-ISO 10304-1, AP04-E-XVII	3 weeks	100 ml
1.2.27. SO <sub>x</sub> , bubbler bottles (ion-chromatography)	EN 14791, equivalent to EN 14791 (NaOH)	2 weeks	250 ml
<b>1.3. Thermal analysis</b>			
1.3.1.a Dilatometry, molded product; 1 °C/ min. up to 1200 °C	Own method TCKI	2 weeks	100 g
1.3.1.b Dilatometry, clay powder; 1°C/min. up to 1200 °C	Own method TCKI	3 weeks	300 g
1.3.1.c Dilatometry, molded product; > 24 hours, program curve	Own method TCKI	2 weeks	100 g
1.3.1.d Dilatometry, clay powder; > 24 hours, program curve	Own method TCKI	3 weeks	300 g
1.3.1.e Dilatometry; expansion-coefficient, up to 750 °C	Own method TCKI	2 weeks	100 g
1.3.1.f Dilatometry; linear thermal expansion up to 100 °C	ISO 10545-8	2 weeks	100 g
1.3.1.g Dilatometry; 10 °C/min. to 550 °C, cooling down to room temperature (moisture expansion measurement)	Own method TCKI	2 weeks	100 g
1.3.1.h Maximal moisture expansion, enhanced method for EN-ISO 10545-10	Own method TCKI	2 weeks	100 g



Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
1.3.1.i Preparation of glaze stick for expansion coefficient measurement	Own method TCKI	2 weeks	100 g
1.3.1.j Stress measurement; 1 °C/ min. up to 1200 °C	Own method TCKI	2 weeks	Flat test piece
1.3.1.k Flex measurement; >2 hours, program curve	Own method TCKI	2 weeks	100 g
1.3.1.l Flex measurement; < 2 hours, program curve	Own method TCKI	2 weeks	100 g
1.3.2. TGA/DSC (Thermogravimetric Analysis/Differential Scanning Calorimetry)	Own method TCKI	1 week	100 g
1.3.3.a Firing test; electric furnace, 0-24 h	Own method TCKI	1 week	-
1.3.3.b Firing test; electric furnace, 24-48 h	Own method TCKI	1 week	-
1.3.4.a Firing test; gas fired kiln (oxidizing or reducing atmosphere), 0-24 h	Own method TCKI	1 week	-
1.3.4.b Firing test; gas fired kiln (oxidizing or reducing atmosphere), 24-48 h	Own method TCKI	1 week	-
1.3.4.c Firing test; gas fired kiln (oxidizing or reducing atmosphere), > 48 h	Own method TCKI	1 week	-
1.3.4.d Firing test; gas fired kiln (reduced atmosphere only)	Own method TCKI	1 week	-
<b>1.4. Mineralogical analysis</b>			
1.4.1. Qualitative (semi-quantitative) mineralogical composition (XRD)	Own method TCKI	2 weeks	10 g
1.4.2. Quantitative mineralogical composition (XRD)	Own method TCKI	4 weeks	10 g
<b>1.5. Hydrophobic agent analyses</b>			
1.5.1. Impregnation to investigate the hydrophobic agents	BRL 1154	6 weeks	10 l
1.5.2. Penetration depth of the hydrophobic agent, per product per surface	BRL 1154	6 weeks	5 l



Determination/activity		Standard or guideline	Accepted time needed	Quantity needed/preprescribed number of samples form standard
1.5.3.	Resistance against water absorption under low pressure, per product per subsoil, Carsten tube	BRL 1154	7 weeks	5 l
1.5.4.	Water pressure resistance after artificial ageing, 3 products	BRL 1154	12 weeks	5 l
1.5.5.	Appearance and colour hydrophobic agent	Own method TCKI	1 week	1.5 l
1.5.6.	Determination of water vapour permeability, including impregnation (per brick type)	EN-ISO 12572	10 weeks	10 l
1.5.7.	Determination of the active part of hydrophobic agent by drying	BRL 1154	3 weeks	0.5 l
1.5.8.	Determination of the active part in hydrophobic agents by complete hydrolysis	BRL 1154	2 weeks	0.5 l
1.5.9.	Determination of pH (indicator paper) of water based hydrophobic agent	Own method TCKI	1 week	100 ml
1.5.10.	Density Pykno meter	EN-ISO 2811-1	2 weeks	1 l
1.5.11.a	Chemical composition of the active content(s) (FTIR)	Own method TCKI	2 weeks	0.5 l
1.5.11.b	(Control of) chemical composition of the active content(s) of hydrophobic agent (FTIR)	Own method TCKI	2 weeks	0.5 l

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/prescribed number of samples form standard	
<b>2 Analysis of products and materials</b>				
<i>Assessment is only possible after testing of the number of products prescribed by the standard.</i>				
Prices are based on tests per product, unless stated otherwise.				
<b>2.1. Dimensions, geometry and appearance</b>				
2.1.1.a	Dimensions/curvature; clay masonry bricks, per stretcher	EN 772-16	1 week	10 units
2.1.1.b	Face sizes, stretcher; clay masonry bricks, per header	BRL 1007 Annex 2B	1 week	10 units
2.1.1.c	Face sizes, header; clay masonry bricks	BRL 1007 Annex 2B	1 week	10 units
2.1.2.	Determination of the flatness of the surfaces; masonry bricks	EN 772-20	1 week	3 units
2.1.3.	Rectangularity of shape; clay masonry bricks	NBN B24-207	1 week	-
2.1.4.	Combined thickness of Webs and shells (always in combination with dimensions following 2.1.1.a); perforated masonry bricks	EN 772-16	1 week	10 units
2.1.5.	Plane parallelism of the bed faces; masonry bricks	EN 772-16	1 week	3 units
2.1.6.	Damages masonry bricks	BRL 1007	2 weeks	50 units
2.1.7.	Dimensions; clay roof tiles	EN 1024	1 week	10 units
2.1.8.a	Overlap dimensions; clay roof tiles (price based on 24 units)	EN 1024, BRL 1510	1 week	24 units
2.1.8.b	Overlap dimensions; clay roof tiles and fittings (price based on 12 units)	EN 1024, BRL 1510	1 week	12 units
2.1.9.	Camber and twist; clay roof tiles	EN 1024, BRL 1510	1 week	10 units
2.1.10.	Damages roof tiles	EN 1024, BRL 1510	2 weeks	100 units
2.1.11.a	Dimensions; clay pavers	EN 1344	1 week	10 units

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
2.1.11.b Curvature; clay pavers (per face)	BRL 2360 Annex I	1 week	20 units
2.1.11.c Header/stretcher proportion; clay pavers (always in combination with dimensions according to 2.1.11.a)	Own method TCKI	1 week	10 units
2.1.12. Geometric properties natural stone	EN 13373	1 week	-
2.1.13.a Geometric properties; square wall and floor tiles, up to 60 x 60 cm, including thickness, excluding surface properties	EN-ISO 10545-2	2 weeks	10 units
2.1.13.b Geometric properties; square wall and floor tiles, up to 60 x 60 cm, excluding thickness and surface properties	EN-ISO 10545-2	2 weeks	10 units
2.1.13.c Geometric properties; rectangular wall and floor tiles, with a maximum length of 60 cm, including thickness, excluding surface properties	EN-ISO 10545-2	2 weeks	10 units
2.1.13.d Geometric properties; rectangular wall and floor tiles, with a maximum length of 60 cm, excluding thickness and surface properties	EN-ISO 10545-2	2 weeks	10 units
2.1.14.a Geometric properties; square wall and floor tiles, >60 x 60 cm up to 160 x 160 cm, including thickness, excluding surface properties	EN-ISO 10545-2	2 weeks	10 units
2.1.14.b Geometric properties; square wall and floor tiles, >60 x 60 cm up to 160 x 160 cm, excluding thickness and surface properties	EN-ISO 10545-2	2 weeks	10 units
2.1.14.c Geometric properties; rectangular wall and floor tiles, with a maximum length >60 cm and length up to 160 cm, including thickness, excluding surface properties	EN-ISO 10545-2	2 weeks	10 units
2.1.14.d Geometric properties; rectangular wall and floor tiles, with a maximum length >60 cm and length of 160 cm, excluding thickness and surface properties	EN-ISO 10545-2	2 weeks	10 units
2.1.15. Surface quality; wall and floor tiles (price based on 30 units)	EN-ISO 10545-2	1 week	30 units
2.1.16.a Tile thickness, length < 60 cm	EN-ISO 10545-2	1 week	10 units





Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/preprescribed number of samples form standard
2.1.16.b Tile thickness, length > 60 cm	EN-ISO 10545-2	1 week	10 units
<b>2.2. Mechanical properties</b>			
2.2.1. Compressive strength; masonry bricks	EN 772-1	3 weeks	10 units
2.2.2. Splitting tensile strength; masonry bricks	EN 1996-1-1 and C1/NB	3 weeks	6 units
2.2.3. Flexural strength; mansony stone	EN 1996-1-1 and C1/NB	2 weeks	6 units
2.2.4. Flexural strength; clay roof tiles	EN 538	2 weeks	10 units
2.2.5. Flexural strength; concrete roof tiles	EN 491	2 weeks	3 units
2.2.6. Transverse breaking load and modulus of rupture; clay pavers	EN 1344	2 weeks	10 units
2.2.7. Resistance to deep abrasion (small wheel); clay pavers and unglazed tiles	EN 1344, EN-ISO 10545-6	2 weeks	5 units
2.2.8. Compressive strength; natural stone	EN 1926	2 weeks	10 units
2.2.9. Flexural strength; natural stone	EN 12372	2 weeks	10 units
2.2.10. Abrasion resistance; natural stone (broad wheel)	EN 14157	2 weeks	6 units
2.2.11. Impact resistance, natural stone (price per 6 units)	EN 14158	2 weeks	6 units
2.2.12. Resistance to surface abrasion; glazed tiles price based on 11 + 8 units	EN-ISO 10545-7	2 weeks	11 + 8 units
2.2.13. Modules of rupture and breaking strength; ceramic tiles	EN-ISO 10545-4	2 weeks	5 - 10 unit
2.2.14. Impact resistance; ceramic tiles (price per 5 units)	EN-ISO 10545-5	2 weeks	5 units
2.2.15. Resistance to thermal shock; unglazed tiles, entire immersion	EN-ISO 10545-9	2 weeks	5 tiles

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
2.2.16. Resistance to thermal shock; glazed tiles, without immersion	EN-ISO 10545-9	2 weeks	5 units
2.2.17. Splitting tensile strength; concrete paving block	EN 1338	2 weeks	8 units
2.2.18. Abrasion resistance (broad wheel); concrete blocks/-paving flags/-kerbs	EN 1338, EN 1339, EN 1340	2 weeks	5 units
2.2.19. Bending strength concrete paving flags/-kerbs	EN 1339	2 weeks	8 untis
2.2.20. Bending strength green (unfired) brick	Own method TCKI	1 week	-
2.2.21. 4-Point flex test; masonry elements, excluding preparation	EN 1052-2	1 week	5 units mansonry
2.2.22.a Adhesive strength of surface material/layer, per measurement position, including drilling/sawing	EN 1015-12	2 weeks	5 positons
2.2.22.b Adhesive strength of an entire strip, per measurement position, exclusive sawing	Own method TCKI, BRL 1330-1	2 weeks	1 panel
2.2.22.c Tensile adhesion strength for cementious adhesives for tiles, per position, including preparation	EN 12004-2/EN 1348	7 weeks	1 type of glue, 10 draw plates
2.2.23. Shear strength for tile adhesive, per measuring position including preparation	EN 12004-2	5 weeks	1 type of glue, 10 draw plates
2.2.24. Shear and deformation dispersion adhesive for tiles, per measuring position including preparation	BRL 1011	5 weeks	1 type of glue, 10 draw plates
2.2.25.a Bond strength adhesive bond cementions adhesives for tiles, after immersion in water, per measuring position, including preparation	EN 12004-2	7 weeks	10 units
2.2.25.b Bond strength adhesive bond cementions adhesives for tiles, after 14 days at 70°C, per measurement position, including preparation	EN 12004-2	7 weeks	10 units
2.2.25.c Bond strength adhesive bond cementions adhesives for tiles, after freeze-thaw test, per set, including preparation	EN 12004-2	7 weeks	1 set (10 units)



Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
2.2.26.a Aging by heat and cooling dispersion adhesives (price per set) (for determination of the shear strength)	EN 12004-2	8 weeks	1 set (10 units)
2.2.26.b Aging after water immersion (price per set) (for determination of the shear strength)	EN 12004-2	8 weeks	1 set (10 units)
2.2.26.c Aging by heat and measuring of elevated temperature (for determination of the shear strength) (price per set)	EN 12004-2	8 weeks	1 set (10 units)
2.2.27. Resistance to thermal shock 80 °C, testpanel (max. dimensions 650 x 450 x 90 mm. Max. weight 60 kg) (price per panel)	BRL 1330-1	3 weeks	1 panel
2.2.28. Static point load; raised access floors	EN 12825	2 weeks	1 unit
2.2.29. Hard body impact; raised floors	EN 12825	2 weeks	1 unit
2.2.30. Scratch hardness of a surface according to Mohs (price per set)	EN 101	2 weeks	1 set (3 units)
2.2.31. Adhesive strength of mortar to masonry bricks by a cross test (excluding preparation)	ASTM C952-12, BRL 1004	2 weeks	10 units
2.2.32. Determination of initial shear strength of horizontal mortar joints in masonry (including preparation)	EN 1052-3	6 weeks	6 units
2.2.33. Flexural strength (1x) and/or compressive strength (2x) of mortars and cements (excluding preparation)	EN 196-1, EN 1015-11	4 weeks	10000 g
2.2.34.a Pendulum impact test vertical building elements and glazing (ball/sandbag/dual wheel impactor), basic rate for one or more tests	ISO 7892, EN 12600, ISO 29584, EN 13049, EN 14019	4 weeks	Dependent on the test settings
2.2.34.b Pendulum impact test, per test	ISO 7892, EN 12600, ISO 29584, EN 13049, EN 14019	4 weeks	Dependent on the test settings
2.2.35. Determination of secant modulus of elasticity in compression	EN 12390-13	4 weeks	1 panel
2.2.36. Determination the dynamic Young's modulus (resonance frequency)	EN 14146, ASTM E1876-15	2 weeks	1 unit

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
<b>2.3. Mechanical properties; slip and skid</b>			
2.3.1.a Skid and slip resistance, paving and flooring materials	EN 16165 Annex C, CEN/TS 16165 Annex C, EN 1338, EN 1339, EN 1340, EN 1341, EN 1342, EN 1343, EN 1344, EN 14231, EN 13036-4, NPR CEN/TS 15676, EN 14904, BS 7976-1, 2 and 3	3 weeks	3 - 6 units
2.3.1.b Skid and slip resistance, after polishing; paving and flooring materials	CEN/TS 12633 (Polishing method)	3 weeks	5 units
2.3.1.c Skid and slip resistance, after additional polishing; paving and flooring	Own method TCKI	3 weeks	5 units
2.3.2. Skid and slip resistance properties of floorings, ramp-walking method, including preparation	EN 16165 Annex A and Annex B, CEN/TS 16165 Annex A en Annex B, DIN 51130, DIN 51097, EN 13451-1, EN 13845	2 weeks	50 x 100 cm
2.3.3. Dynamic friction coefficient floor materials, GMG 200, per surface, per contamination	EN 16165 Annex D, CEN/TS 16165 Annex D, DIN 51131, EN 14041, EN 13893, NEN 7909	2 weeks	100 x 100 cm
<b>2.4. Physical/hygric properties</b>			
2.4.1. Free or forced water absorption, gross and net dry density; clay masonry bricks and clay pavers.	EN 772-21, EN 772-3, EN 772-13	2 weeks	10 units
2.4.2. Perforation volume of 'frog' or voids; masonry bricks	EN 772-9	2 weeks	10 units
2.4.3. Initial rate of water absorption; clay masonry bricks	EN 772-11	2 weeks	10 units
2.4.4. Water absorption by boiling in water; masonry bricks	EN 772-7	2 weeks	10 units
2.4.5. Water impermeability; clay roof tiles	EN 539-1 method 2, BRL 1510	3 weeks	10 units



Determination/activity		Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
2.4.6.	Progressive water absorption, roof tiles	Own method TCKI	3 weeks	-
2.4.7.	Water absorption natural stone at atmospheric pressure	EN 13755	2 weeks	-
2.4.8.	Density, apparent density, total and open porosity natural stone	EN 1935	2 weeks	6 units
2.4.9.	Water absorption, aparent porosity, apparent relative density, and bulk density; ceramic tiles	EN-ISO 10545-3	2 weeks	5 - 12 units
2.4.10.	Crazing resistance; glazed ceramics tiles, exclusive conditioning (by heat treatment)	EN-ISO 10545-11	2 weeks	5 units
2.4.11.	Sensitivity to moisture expansion, ceramic tiles (price for 5 tiles), excluding pre-treatment	EN-ISO 10545-10	2 weeks	5 units
2.4.12.	Light and colour fastness; ceramic tiles (price for 5 units)	DIN 51094	6 weeks	5 units
2.4.13.	Hygric change in length and shrinkage of concrete block and masonry brick	EN 772-14	6 weeks	6 units
2.4.14.	Air content of mortar	EN 1015-7	2 weeks	1 unit
2.4.15.	Consistence of mortar	EN 1015-3	2 weeks	1 unit
2.4.16.a	Colour measurement: colour, light reflection value (LRV), brightness index (BI), gloss	ASTM C609-07, NBN B 23-004, ISO 11664-3, ISO 11664-4	2 weeks	5 units
2.4.16.b	Colour measurement: light reflection value (LRV), brightness index (BI)	ASTM C609-07, NBN B 23-004 ISO 11664-3	2 weeks	5 units
2.4.17.	Optical condition of surfaces, pores and structures(microscopy)	Own method TCKI	2 weeks	1 unit
2.4.18.	Pore size distribution (Hg prosimetry): see 1.1.7.	Own method TCKI		
2.4.19.	Water vapor permeability of a building material	EN-ISO 12572	6 weeks	5 units



Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/predescribed number of samples form standard
<b>2.5. Freeze-thaw and hygrothermal behaviour</b>			
2.5.1.a Freeze-thaw resistance; clay masonry bricks/test panel (maximum dimensions 650x450x90 mm, max. weight 60 kg) (price per panel)	EN 772-22	10 weeks	1 panel (20 units)
2.5.1.b Freeze-thaw resistance; brick slips on fully supplied test panel (maximum dimensions 650x450x90 mm, max. weight 60 kg) (price per panel)	EN 772-22	10 weeks	1 panel
2.5.2. Freeze-thaw resistance; clay roof tiles (price per 6 units)	EN 539-2	10 weeks	6 units
2.5.3. Freeze-thaw resistance; clay pavers (price per 10 units)	EN 1344	10 weeks	10 units
2.5.4. Freeze-thaw resistance; ceramic tiles (price per 10 units)	EN-ISO 10545-12	10 weeks	10 units
2.5.5. Freeze-thaw resistance; natural stone	EN 12371	10 weeks	7 units
2.5.6. Freeze-thaw resistance with de-icing salts; concrete blocks/tile (price per 3 units)	EN 1338, EN 1339	7 weeks	3 units
2.5.7. Freeze-thaw resistance; concrete bricks (price per 4 units)	BRL 1007 from 2010, NEN 2872	10 weeks	4 units
2.5.8. Freeze-thaw resistance; calcium silicate masonry units (price per 6 units)	EN 772-18	7 weeks	6 units
2.5.9. Determination of hygrothermal behavior of strips of stone bonded to a surface	NEN-EN 16383	-	1 test panel
<b>2.6. Chemical or environmental-hygienic properties</b>			
2.6.1. 'Active' water-soluble salts (Ca, K, Mg, Na, sulphate and electrical conductivity), shaking test included; clay masonry bricks (price per 10 units)	EN 772-5 (K, Mg, Na), NEN 6966 (Ca, SO <sub>4</sub> ) and ISO 7888 (conduction)	4 weeks	10 units

Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/prescribed number of samples form standard
2.6.2. Efflorescence; clay masonry bricks; only in combination with dimensions according to 2.1.1.a (price per 5 units)	NBN B24-209	3 weeks	-
2.6.3. Acid resistance; clay pavers (price per 5 units)	EN 1344	2 weeks	5 units
2.6.4.a Pb and Cd release; consumer pottery and ceramic tiles (price per unit)	EN 1388-1/EN-ISO 10545-15	2 weeks	-
2.6.4.b Pb and Cd release; consumer pottery and ceramic tiles (price per 3-4 units)	EN 1388-1/EN-ISO 10545-15	2 weeks	3 - 4 units
2.6.5. Chemical resistance; ceramic tiles (price per 3 units)	EN-ISO 10545-13	2 weeks	3 units
2.6.6. Resistance to staining; ceramic tiles (price per 5 units)	EN-ISO 10545-14	3 weeks	5 units
2.6.7. Leaching behaviour, building materials (granules), availability test, element analysis excluded (price per 3 units)	NEN 7371	3 weeks	3 units
2.6.8.a Leaching behaviour, monolithic building materials, tank test, element analysis excluded and excluded pH and conduction (price per 3 units)	NEN 7375, AP04-U-II, CEN/TS 166737-2	12 weeks	3 units
2.6.8.b. Leaching behaviour, monolithic building materials, short tank test, element analysis, and pH conductivity excluded (price per 3 units)	BRL 52230	3 weeks	3 units
2.6.9. Leaching behaviour, granular materials, tank test, element analysis excluded and excluded pH and conduction	NEN 7347	12 weeks	2000 g
2.6.10.a Leaching behaviour, granulated building materials, column test, element analysis excluded, and pH conductivity excluded	NEN 7373, CEN/TS 16637-3, DIN 19528	6 weeks	2000 g
2.6.10.b Leaching behaviour, granulated building materials, short column test, element analysis excluded, and pH conductivity excluded	NEN 7383	6 weeks	2000 g
2.6.11. Leach: Shake test stomach acid pH 1.5, excluding elemental analysis and excl. PH and conductivity	Own method TCKI	2 weeks	1000 g
2.6.12. Determination of resistance to chemical corrosion glazes	ISO 28706-2	4 weeks	4 units



Determination/activity	Standard or guideline	Accepted time needed	Quantity needed/prescribed number of samples form standard
<b>3</b> <b>Miscellaneous</b>			
3.1.      Binder in mortar	Own method TCKI	2 weeks	150 g
3.2.      Preparation of wash bottles for (flue) gas (emission) measurements	NEN 2819, EN 14791, EN 1911	1 week	-