

Annex to declaration of accreditation (scope of accreditation)  
Normative document: EN ISO/IEC 17025:2017  
Registration number: L 254

of **Stichting Technisch Centrum voor de Keramische Industrie (TCKI)**  
**Laboratorium en Meetgroep**

This annex is valid from: **06-04-2022** to **01-11-2024**

Replaces annex dated: **21-10-2021**

**Location(s) where activities are performed under accreditation**

**Head Office**

Florijnweg 6  
6883 JP  
Velp (Gelderland)  
The Netherlands

<b>Location</b>	<b>Abbreviation/ location code</b>
Florijnweg 6 6883 JP Velp (Gelderland) The Netherlands	VLP

<b>No.</b>	<b>Material or product</b>	<b>Type of activity<sup>1</sup></b>	<b>Internal reference number</b>	<b>Location</b>
<b>Geometric properties</b>				
1	Masonry bricks	Determination of dimensions; calliper	ANA-KO-46 EN 772-16	VLP
2		Determination of stretcher face length and height and the camber of the stretcher face; calliper	ANA-KO-44 BRL 1007 Annex 2B	VLP
3	Clay roof tiles	Determination of geometric properties; dimensions; calliper	ANA-KO-03 EN 1024	VLP

This annex has been approved by the Board of the  
Dutch Accreditation Council, on its behalf,

J.A.W.M. de Haas

<sup>1</sup> If there is a referral to a code starting with NAW, NAP, EA or IAF, this concerns a scheme mentioned on the [RvA-BR010-lijst](#).  
If no date or version number is mentioned for a normative document, the accreditation concerns the most current version of the document or scheme.

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4	Clay roof tiles	Determination of geometric properties; overlap dimensions; ruler	ANA-KO-18A, ANA-KO-18B EN 1024	VLP
5		Determination of geometric properties; non-camber/ twist; micrometers	ANA-KO-16 EN 1024	VLP
6	Clay pavers	Determination of dimensions; calliper	ANA-KO-04 annex B from EN 1344	VLP
7		Determination of curvature; calliper	ANA-KO-44 BRL 2360, Annex I	VLP
8	Ceramic tiles	Determination of dimensions; micrometer sand screw micrometer	ANA-KO-29 EN-ISO 10545-2	VLP

#### Mechanical provisions

9	Masonry bricks	Determination of compressive strength; destructive test	ANA-KO-37 EN 772-1	VLP
10	Clay roof tiles	Determination of flexural strength; destructive test	ANA-KO-17 EN 538	VLP
11	Clay pavers	Determination of transverse breaking load and modulus of rupture; destructive test	ANA-KO-14 Annex D from EN 1344	VLP
12	Clay pavers and en ceramic tiles	Determination of abrasion resistance; abrasion resistance meter	ANA-KO-24 Annex E from EN 1344 and EN-ISO 10545-6	VLP
13	Ceramic tiles	Determination of resistance to surface abrasion; surface abrasion resistance meter	ANA-KO-30 EN-ISO 10545-7	VLP
14		Determination of modules of rupture and breaking strength; destructive test	ANA-KO-32 EN-ISO 10545-4	VLP

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<b>Physical/hygric properties</b>				
15	Masonry bricks	Determination of volume of frog or voids; sand filling method, volumetric	ANA-KO-39, ANA-KO-46 EN 772-9	VLP
16	Masonry units	Determination of net volume and percentage of voids; gravimetrically	ANA-KO-39, ANA-KO-46 EN 772-3	VLP
17	Masonry units (except for natural stone)	Determination of net and gross dry density; gravimetrically	ANA-KO-39, ANA-KO-46 EN 772-13	VLP
18	Masonry bricks	Determination of initial rate of water absorption; gravimetrically	ANA-KO-38, ANA-KO-46 EN 772-11	VLP
19	Masonry bricks and clay pavers	Determination of cold water absorption; gravimetrically	ANA-KO-41 EN 772-21	VLP
20	Clay roof tiles	Determination of water-impermeability; permeability test	ANA-KO-15 EN 539-1, method 2	VLP
21	Ceramic tiles	Determination of water absorption, apparent porosity, apparent relative density and bulk density; gravimetrically	AKA-KO-31 EN-ISO 10545-3	VLP
22		Determination of crazing resistance; autoclave	ANA-KO-36 in accordance with EN-ISO 10545-11, BRL 1010	VLP
23	Buildingmaterials and raw materials / additives	Determination of the expansion or shrinkage for a given temperature profile; dilatometry	APP-08 in-house method	VLP
24	All unfired, fired and other porous materials applicable for the Ceramic Industry	Determination of the pore size distribution; mercury porosimetry	ANA-DI-16 DIN 66133: 1993	VLP

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<b>Determination freeze-thaw resistance</b>				
25	Stony Building Materials	Determination of freeze-thaw resistance; heat extraction by convection	ANA-KO-19 NEN 2872, 1989	VLP
26	Masonry bricks	Determination of freeze-thaw resistance; heat extraction by convection	ANA-KO-19 NEN-EN 772-22  ANA-KO-19 NPR-CEN/TS 772-22: 2006  ANA-KO-19 NPR/CEN/TS 772-22:2006 and pre-treatment in accordance with Annex C from EN 1344  ANA-KO-19 DIN V52252-3  ANA-KO-19 DIN V52252-3 and pre-treatment with Annex C from EN 1344	VLP
27	Clay roof tiles	Determination of freeze-thaw resistance; heat extraction by convection	ANA-KO-19 EN 539-2	VLP
28	Clay pavers	Determination of freeze-thaw resistance; heat extraction by convection	ANA-KO-19 Annex C from EN 1344	VLP
29	Ceramic tiles	Determination of freeze-thaw resistance; heat extraction by convection	ANA-KO-19 EN-ISO 10545-12	VLP
<b>Chemical-physical research</b>				
30	Masonry bricks	Determination of brick-efflorescence; visual inspection	ANA-KO-48 NBN B 24-209	VLP
31	Ceramic tiles	Determination of chemical resistance; interaction with chemicals and visual inspection	ANA-KO-28 EN-ISO 10545-13	VLP
32		Determination of resistance to staining; treatment with staining agents, cleaning and visual inspection	ANA-KO-35 EN-ISO 10545-14	VLP

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<b>Gravimetric measurements</b>				
33	Raw materials (clay, sand and additives)	Determination of moisture content and/of density, dry and wet, gravimetrically	ANA-FY-01 in-house method	VLP
34		Determination of particle size distribution; pipette analysis and wet and dry sieving, gravimetrically  Pipette fractions 2, 10 and 16 µm sieving fractions 45, 63, 125 and 250 µm,	ANA-DG-02 in-house method	VLP
35	Raw materials (sand and additives)	Determination of grain size distribution of grainy material, dry sieving, gravimetrically  0,045; 0,063; 0,125; 0,250; 0,500; 1,0; 2,0 and 4,0 mm	ANA-DG-01 in-house method	VLP
36	Ceramic materials and raw materials (clay, sand and additives)	Determination of loss on ignition at 1025 °C; gravimetrically	ANA-DI-06 in-house method	VLP
<b>Anorganic analyses</b>				
37	Raw materials (clay, sand and additives)	Determination of organic carbon; IR measurement of the amount of CO <sub>2</sub> released after incineration	ANA-DI-14 in-house method	VLP
38	Raw materials (clay, sand and additives)	Determination of total carbon; IR measurement of the amount of CO <sub>2</sub> released after incineration	ANA-DI-18 in house method	VLP
39	Watery solutions	Determination of pH; potentiometry	ANA-DI-04 EN-ISO 10523	VLP
40		Determination of electrical conductivity; conductometry	ANA-DI-03 ISO 7888	VLP
41	Ceramic materials and raw materials (clay, sand and additives)	Determination of sulphur after destruction with HClO <sub>4</sub> /HNO <sub>3</sub> ; ICP-AES	MVB-03 in-house method	VLP

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42	Raw materials (clay, sand and additives)	Determination of water-soluble salts; ICP-AES  sodium, potassium, calcium, magnesium (expressed as oxides) and sulphur (expressed as sulphate)	MVB-11 in-house method	VLP
43	Masonry bricks	Determination of soluble salts; ICP-AES  sodium, potassium and magnesium	ANA-KO-45 EN-772-5	VLP
44		Determination of soluble salts; ICP-AES  sulphur (expressed as sulphate) and calcium	ANA-KO-45 in-house method (sample pre-treatment EN 772-5, eluate analysis NEN 6966)	VLP
45	Ceramic materials and raw materials (clay, sand and additives)	Determination of the composition of elements by X Ray fluorescence; Wave length dispersive XRF  silicon, aluminium, sodium, potassium, calcium, magnesium, iron, titanium, manganese, tin, molybdenum, strontium, lead, zinc, copper, nickel, cobalt, chromium, vanadium, barium, zircon and phosphor (expressed as oxides)  including loss on ignition at 1025 °C; gravimetrically	ELM-05, ANA-DI-06 XRF determination: EN 15309  loss on ignition: in-house method	VLP
46	Raw materials (clay, sand and ceramic additives)	Determination of the composition of elements by X Ray fluorescence; Wave length dispersive XRF  iron, calcium, manganese, chromium and titanium (expressed as oxides)	ELM-08 in-house method	VLP
47	Glazed ceramic tiles	Determination of lead and cadmium release; ICP-AES	MVB-16 EN-ISO 10545-15	VLP
48	Consumer pottery	Determination of lead and cadmium release; ICP-AES	MVB-16 in-house method  (sample pre-treatment EN 1388-1, eluate analysis EN-ISO 10545-15)	VLP

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<b>Leaching behaviour</b>				
a	Ceramic building materials	Determination of leaching of inorganic components of monolithic materials with the abbreviated leaching test.	MVB-13 BRL 52230, chapter 4	VLP
<p><b>AP04-verrichtingen</b> (versie 23-06-2016 AP04) (NAW-0132), <b>pakket U2 (uitloogonderzoek; vormgegeven bouwstoffen; diffusiebepaalde uitloging)</b> (versie 23-06-2016 U2) (NAW-0132-4), <b>pakket E (analyse van eluaten)</b> (versie 23-06-2016) (NAW-0132-1)  <b>volledig pakket (waarbij de bepaling van het gehalte aan cyaniden structureel uitbesteed wordt)</b></p>				
--	Moulded building materials	Sample treatment for AP04-UII (and AP04-E)	MVB-13 AP04-V	VLP
b		Determination of emission of inorganic components; tank test	MVB-13 AP04-U-II and NEN 7375	VLP
49	Eluates	Determination of pH; potentiometry	ANA-DI-04 AP04-U-IV and ISO 10523	VLP
50		Determination of electrical conductivity of an eluate; conductometry	ANA-DI-03 in accordance with AP04-U-V and in accordance with ISO 7888	VLP
51		Determination of the metal content; ICP-AES  lead, cadmium, zinc, nickel, arsenic, chrome, copper, molybdenum, barium, cobalt, vanadium and calcium	ELM-04 AP04-E-I, -II, -III, -IV, -V, -VI, -VII, -IX, -X, -XII, -XV and -XIX and NEN 6966	VLP
52		Determination of mercury content; hydride ICP-AES	ELM-04 AP04-E-VIII and NEN 7324	VLP
53		Determination of the metal content; hydride ICP-AES  tin, antimony en selenium	ELM-04 AP04-E-XI, -XIII and -XIV and NEN 6966	VLP
54	Determination of the metal content;; ICP-MS  lead, cadmium, zinc, nickel, arsenic, chromium, copper, molybdenum, barium, cobalt, vanadium, calcium, mercury, tin, antimony and selenium	ELM-11 AP04-E-I, -II, -III, -IV, -V, -VI, -VII, VIII, -IX, -X, XI, -XII, -XIII, -XIV -XV en -XIX en NEN-EN-ISO 17294-2	VLP	

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55	Eluates	Determination of anion content; ion-chromatography  bromide, chloride and sulphate	ELM-03 AP04-E-XVII and EN-ISO 10304-1	VLP
56		Determination of fluoride content; potentiometry	ANA-DI-15 AP04-E-XVIII and NEN 6578	VLP
<b>Emission measurements</b>				
57	Emitted air, smoke, process and exhaust gases	Determination of homogeneity (plane area assessment) for the purpose of all the samplings and tests mentioned in this scope	ANA-MGR-07 EN 15259	VLP
<b>Cluster: Physical parameters</b>				
58	Emitted air, smoke, process and exhaust gases	Determination of the waste gas characteristics: flow rate; differential pressure measurement	ANA-MGE-01 ISO 10780 ISO 16911-1	VLP
59		Determination of the water vapor content (in pipes); gravimetry	ANA-MGR-02 ANA-MGR-01 NEN-EN 14790	VLP
<b>Cluster: Dust related</b>				
60	Emitted air, smoke, process and exhaust gases	Determination of the dust content: gravimetry (including associated sampling)	ANA-MGA-02 in-house method ANA-MGR-02 NEN-EN 13284-1	VLP
<b>Cluster: Gaseous (in)organic</b>				
61	Emitted air, smoke, process and exhaust gases	Determination of sulphur dioxide (SO <sub>2</sub> ) content; IR (including associated sampling)	ANA-MGR-05 NEN-ISO 7935	VLP
62		Determination of content of nitrogen oxides (NO <sub>2</sub> ) and oxygen (O <sub>2</sub> ) chemiluminescence and paramagnetism (including associated sampling)	ANA-MGR-05, ANA-MGR-06 NEN-ISO 10849 NEN-EN 14789 NEN-EN 14792	VLP



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63	Emitted air, smoke, process and exhaust gases	Determination of hydrocarbon C <sub>x</sub> H <sub>y</sub> content; FID (including associated sampling)	ANA-MGR-05 NEN-EN 12619	VLP
64	Emitted air, smoke, process and exhaust gases	Determination of CO, CO <sub>2</sub> content; IR (including associated sampling)	ANA-MGR-05 ISO 12039 NEN-EN 15058	VLP
<b>Inorganic analyses (wet-chemical)</b>				
65	Emitted air, smoke, process and exhaust gases	Determination of chloride content; potentiometric titration / ion-chromatography (including associated sampling)	MVW-03, ANA-MGR-01, ELM-03 NEN-EN 1911	VLP
66		Determination of fluoride content; ion selective electrode (including associated sampling)	ANA-DI-15, MVW-03, ANA-MGR-01 NEN-ISO 15713	VLP
67		Determination of content of sulphur oxides; IC (including associated sampling)	MVW-03, ELM-03 in-house method ANA-MGR-01 NEN-EN 14791	VLP
<b>Work place atmosphere measurements</b>				
68	Air	Determination of total and respirable (fine) dust content in the work place; gravimetry  Measurements in situ	ANA-MGA-01, ANA-MGA-02 in-house method	VLP
		Determination of total and respirable (fine) dust content for the work place; gravimetry	ANA-MGA-01, ANA-MGA-02 in-house method	
69		Determination of (respirable) quartz content; FTIR	ANA-MGA-03 NIOSH 7602	VLP

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<b>Analysis of surface areas and floorings</b>				
70	Floor covering material	Determination of anti-slip properties of floorings; dynamic coefficient of friction; tribometer  Measurements at the laboratory and in situ	ANA-KO-55 CEN/TS 16165 Annex D, DIN 51131, EN 14041, NEN 7909 and EN 13893	VLP
71		Determination of anti-slip properties of floorings; the maximum angle of the surface until slip occurs; ramp walking test	ANA-KO-54 CEN/TS 16165 Annex A and B, DIN 51097, DIN 51130, EN 13451-1 and EN13845	VLP
72	Clay pavers	Determination of unpolished and polished slip and skid resistance; pendulum test	ANA-KO-23, ANA-KO-25  Polishing: §4.1 van BRL 2360 and CEN/TS 12633  Measurement: CEN/TS 16165 Annex C, EN 1344 §4.2.5, EN 1338 (annex I), EN1339 (annex I), EN 1340 (annex I), EN14231, EN 1341 §4.6, EN 1342 §4.6, CEN/TS 15676, EN 14904 §4.2, EN 13036-4, BS 7976-2	VLP