



STS Directory

Accreditation number: STS 0133

International standard: ISO/IEC 17025:2017
Swiss standard: SN EN ISO/IEC 17025:2018

TFB AG
Technology and research in
concrete construction
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Initial accreditation: 19.10.1995
Current accreditation: 04.03.2019 to 03.03.2024
Scope of accreditation
see: www.sas.admin.ch
(Accredited bodies)

Scope of accreditation as of 20.05.2022

Testing laboratory for hydraulic binders, soils, mortar, masonry units, concrete, aggregates, additives, admixtures, pigments, fibres, mixing water, protection and repair of concrete structures, bituminous building materials and binders as well as for in situ tests

Group of products or materials, field of activity	Principle of measurement ³⁾ (characteristics, measuring ranges, type of test)	Test methods, remarks (national, international standards, in-house test methods)
Various tests with multiple applications: building materials, buildings, water, wood, plastics, etc. (Hardened) concrete	Determination of limestone and gypsum content with Thermo-Gravimetric Analysis TGA	In-house procedure
	Determination of sodium and potassium content with flame photometry	In-house procedure
	Sampling, testing and assessing the suitability of water, including water recovered from processes in the concrete industry, as mixing water for concrete	SN EN 1008 resp. SIA 162.157
	Detailed microscopic analysis of microstructure and determination of causes of damages	In-house procedure



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Group of products or materials, field of activity	Principle of measurement ³⁾ (characteristics, measuring ranges, type of test)	Test methods, remarks (national, international standards, in-house test methods)
	Determination of cement content	In-house procedure
	Determination of the carbon dioxide content with thermo-gravimetric analysis TGA	In-house procedure
	Microscopic analysis of micro-structure	In-house procedure
	Determination of the freeze and freeze-thaw resistance	In-house procedure: "TFB method", Cementbulletin 10/86 "Prüfung von Festbeton auf Frost- und Frost-Tausalz-Beständigkeit"
	Determination of the Freeze Cycling	SIA 162/1, test nr. 8, repealed standard
	Tensile behavior test according to standard: High-Performance Fiber Concrete (HPFC) - Materials, Dimensioning and Execution	SIA 2052, annex D
	Determination of water infiltration rate	SIA 262/1 appendix A resp. SN 505 262/1
	Determination of the resistance to chlorides	SIA 262/1 appendix B resp. SN 505 262/1
	Determination of the Freeze-thaw resistance	SIA 262/1 appendix C resp. SN 505 262/1
	Determination of the resistance to sulfates	SIA 262/1 appendix D resp. SN 505 262/1
	Determination of air infiltration rate	SIA 262/1 appendix E resp. SN 505 262/1
	Resistance to alkali-aggregate reaction (AAR): performance test	SIA 262/1 appendix G resp. SN 505 262/1
	Determination of resistance to carbonation	SIA 262/1 appendix I resp. SN 505 262/1
	Determination of the flexural tensile strength according to norm: Betondecken	SN 640 461
	Determination of the freeze and freeze-thaw resistance BE I (concrete surface layer) according to norm: Betondecken - Prüfmethoden zur Bestimmung des Frost- und Frosttaumittelwiderstands	SN 640 464

1) Scope of accreditation type A (fix)

2) Scope of accreditation type B (flexible)

3) Scope of accreditation type C (flexible)

Definition of flexibility see SAS Document 741



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Group of products or materials, field of activity	Principle of measurement ³⁾ (characteristics, measuring ranges, type of test)	Test methods, remarks (national, international standards, in-house test methods)
Cement	Determination of carbonation depth in hardened concrete by the phenolphthalein method - Products and systems for the protection and repair of concrete structures	SN EN 14630 resp. SIA 262.495
	Measurement of bond strength by pull-off (Products and systems for the protection and repair of concrete structures)	SN EN 1542 resp. SIA 162.421
	Determination of water absorption coefficient by partial immersion (ISO 15148:2002) according to norm: Hygrothermal performance of building materials and products	SN EN ISO 15148 resp. SIA 180.224
	Quantitative determination of constituents of cement	CEN TR 196-4
	Determination of the density of cement (helium-pycnometer)	In-house procedure
	Determination of the Total Organic Carbon TOC	In-house procedure
	Determination of loss on ignition (300, 600, 900°C)	In-house procedure
	Determination of the loss on ignition under nitrogen by TGA	In-house procedure
	Determination of the carbon dioxide content with thermogravimetric analysis TGA	In-house procedure
	Determination of gypsum content with Differential Scanning Calorimetry DSC	In-house procedure
	Determination of active alcalis of cements	SIA 262/1 appendix G and SIA guideline 2042 appendix F.2
	Determination of Strength (flexural and compressive strength)	SN EN 196-1 resp. SIA 215.011
	Determination of the water soluble chromium (VI) content of cement	SN EN 196-10 resp. SIA 215.040
Determination of the alkalines by flame photometry	SN EN 196-2 resp. SIA 215.012	



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	<p>Total chemical analysis of cement with X-Ray Fluorescence XRF</p> <p>Determination of the Chloride, Carbon Dioxide and Alkali Content of Cement</p> <p>Determination of chloride content</p> <p>Determination of loss on ignition according to norm: chemical analysis of cements</p> <p>Determination of sulfides content according to norm: chemical analysis of cements</p> <p>Determination of content of insoluble residues according to norm: chemical analysis of cements</p> <p>Chemical Analysis of Cement</p> <p>Gravimetric determination of sulfates content according to norm: chemical analysis of cements</p> <p>Determination of setting time and soundness</p> <p>Pozzolanicity Test for Pozzolanic cements</p> <p>Determination of Fineness</p> <p>Methods of taking and preparing samples of cement</p> <p>Determination of heat of hydration; semi-adiabatic method</p> <p>Determination of tricalcium aluminate content according to national appendix: cement - Composition, specifications and conformity criteria of common cements</p> <p>Determination of reactive SiO₂ according to norm: cement - Composition, specifications and conformity criteria of common cements</p>	<p>SN EN 196-2 resp. SIA 215.012</p> <p>SN EN 196-2 resp. SIA 215.012</p> <p>SN EN 196-2 resp. SIA 215.012</p> <p>SN EN 196-2 resp. SIA 215.012</p> <p>SN EN 196-2 resp. SIA 215.012</p> <p>SN EN 196-2 resp. SIA 215.012</p> <p>SN EN 196-2 resp. SIA 215.012</p> <p>SN EN 196-2 resp. SIA 215.012</p> <p>SN EN 196-3 resp. SIA 215.013</p> <p>SN EN 196-5 resp. SIA 215.015</p> <p>SN EN 196-6 resp. SIA 215.016</p> <p>SN EN 196-7 resp. SIA 215.017</p> <p>SN EN 196-9 resp. SIA 215.019</p> <p>SN EN 197-1 resp. SIA 215.002</p> <p>SN EN 197-1 resp. SIA 215.002</p>



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Additives, admixtures	Qualification tests and determination of the conformity according to norm: cement - Composition, specifications and conformity criteria of common cements	SN EN 197-1 resp. SIA 215.002
	Determination of the Total Organic Carbon TOC	In-house procedure
	Determination of the activity index according to norm: Silica fume for concrete. Definitions, requirements and conformity criteria	SN EN 13263-1 resp. SIA 262.161
	Determination of reactive CaO according to norm: chemical analysis of cements	SN EN 196-2 resp. SIA 215.012
	Determination of the activity index according to norm: Fly ash for concrete. Definition, specifications and conformity criteria	SN EN 450-1 resp. SIA 262.086
	Determination of the need in water according to norm: Fly ash for concrete. Definition, specifications and conformity criteria	SN EN 450-1 resp. SIA 262.086
	Determination of fineness by wet sieving - Method of testing fly ash	SN EN 451-2 resp. SIA 162.085
	Determination of water soluble chloride content	SN EN 480-10 resp. SIA 262.180
	Determination of the alkali content of admixtures	SN EN 480-12 resp. SIA 262.182
	Determination of the effect on corrosion susceptibility of reinforcing steel by potentiostatic electrochemical test	SN EN 480-14 resp. SIA 262.184
Mortar (for masonry)	Determination of setting time (admixtures for concrete, mortar and grout)	SN EN 480-2 resp. SIA 262.172
	Determination of flexural and compressive strength (screed materials)	SN EN 13892-2 resp. SIA 252.004
Fresh concrete and mortar	Determination of the water content of freshly mixed concrete	SIA 262/1 appendix H resp. SN 505 262/1



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Concrete structures and elements	Sampling fresh concrete	SN EN 12350-1 resp. SIA 262.231
	Sieve segregation test (Self-compacting concrete)	SN EN 12350-11 resp. SIA 262.241
	J-ring test (Self-compacting concrete)	SN EN 12350-12 resp. SIA 262.242
	Slump test	SN EN 12350-2 resp. SIA 262.232
	Determination of degree of compactability	SN EN 12350-4 resp. SIA 262.234
	Flow table test	SN EN 12350-5 resp. SIA 262.235
	Determination of Density	SN EN 12350-6 resp. SIA 262.236
	Determination of air content; Pressure methods	SN EN 12350-7 resp. SIA 262.237
	Slump-flow test (Self-compacting concrete)	SN EN 12350-8 resp. SIA 262.238
	Inclined tube test according to norm: Test methods for grout for prestressing tendons chap. 4.4	SN EN 445 resp. SIA 262.071
	Wick-induced test according to norm: Test methods for grout for prestressing tendons chap. 4.5	SN EN 445 resp. SIA 262.071
	Density test according to norm: Test methods for grout for prestressing tendons chap. 4.7	SN EN 445 resp. SIA 262.071
	Sieve test and fluidity test with cone method according to norm: Test methods for grout for prestressing tendons chap. 4.2 and 4.3	SN EN 445 resp. SIA 262.071
	Determination of chloride content in hardened concrete - Products and systems for the protection and repair of concrete structures	SN EN 14629 resp. SIA 262.496

1) Scope of accreditation type A (fix)

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Definition of flexibility see SAS Document 741



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<p>Concrete and mortar: in situ tests</p> <p>(Mineral-) aggregates, sand, gravel, coarse aggregates, crushed stones, filler, unbound materials, etc.</p>	Determination of chloride content in hardened concrete (with X-Ray Fluorescence XRF) - Products and systems for the protection and repair of concrete structures	SN EN 14629 resp. SIA 262.496, modified procedure
	Execution and interpretation of the measurement of the cover depths in reinforced concrete structures	In-house procedure
	Measurement of the pull-off strength of finished screeds	SIA 251 resp. SN 567 251, chap. 6.4
	Execution and interpretation of potential measurement on reinforced concrete	SIA guideline 2006
	Measurement of bond strength by pull-off	SN EN 1542 resp. SIA 162.421
	Determination of the Total Organic Carbon TOC (for ex. in limestone filler)	In-house procedure
	Determination of SiO ₂ in sand	In-house procedure
	Determination of SiO ₂ with X-Ray Fluorescence XRF	In-house procedure
	Microbar test - Test methods of reactivity against alkali of aggregates	SIA guideline 2042, appendix E
	Mineralogy and qualitative and quantitative petrography of aggregates and filler	SN 670 115
	Determination of resistance of aggregates to fragmentation	SN EN 1097-2 resp. SN 670 903-2
	Determination of loose bulk density and voids of aggregates	SN EN 1097-3 resp. SN 670 903-3
	Determination of particle density and water absorption of aggregates	SN EN 1097-6 resp. SN 670 903-6
Determination of acid-soluble sulfates according to norm: Tests for chemical properties of aggregates - Part 1: Chemical analysis	SN EN 1744-1 resp. SN 670 905-1	

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	<p>Determination of water soluble chloride salts according to norm: Tests for chemical properties of aggregates - Part 1: Chemical analysis</p> <p>Determination of water-soluble sulfates according to norm: Tests for chemical properties of aggregates - Part 1: Chemical analysis</p> <p>Determination of humic acid content according to norm: Tests for chemical properties of aggregates - Part 1: Chemical analysis</p> <p>Determination of total sulfur content according to norm: Tests for chemical properties of aggregates - Part 1: Chemical analysis</p> <p>Determination of humus content according to norm: Tests for chemical properties of aggregates - Part 1: Chemical analysis</p> <p>Determination of organic components according to norm: Tests for chemical properties of aggregates - Part 1: Chemical analysis</p> <p>Determination of lightweight contaminants according to norm: Tests for chemical properties of aggregates - Part 1: Chemical analysis</p> <p>Determination of acid soluble chloride salts in aggregates</p> <p>Determination of the influence of recycled aggregate extract on the initial setting time of cement</p> <p>Methods for sampling aggregates</p> <p>Methods for reducing laboratory samples of aggregates</p> <p>Determination of particle size distribution of aggregates - Sieving Method</p>	<p>SN EN 1744-1 resp. SN 670 905-1</p> <p>SN EN 1744-1 resp. SN 670 905-1</p> <p>SN EN 1744-1 resp. SN 670 905-1</p> <p>SN EN 1744-1 resp. SN 670 905-1</p> <p>SN EN 1744-1 resp. SN 670 905-1</p> <p>SN EN 1744-1 resp. SN 670 905-1</p> <p>SN EN 1744-1 resp. SN 670 905-1</p> <p>SN EN 1744-1 resp. SN 670 905-1</p> <p>SN EN 1744-5 resp. SN 670 905-5</p> <p>SN EN 1744-6 resp. SN 670 905-6</p> <p>SN EN 932-1 resp. SN 670 901-1</p> <p>SN EN 932-2 resp. SN 670 901-2</p> <p>SN EN 933-1 resp. SN 670 902-1</p>



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Soft rocks, soils, ground	Tests for geometrical properties of aggregates - Classification test for the constituents of coarse recycled aggregate	SN EN 933-11 resp. SN 670 902-11
	Determination of Particle Shape of aggregates - Flakiness Index	SN EN 933-3 resp. SN 670 902-3
	Determination of percentage of crushed and broken surfaces in coarse aggregate particles	SN EN 933-5 resp. SN 670 902-5
	Determination of flow coefficient of aggregates	SN EN 933-6 resp. SN 670 902-6
	Methylene blue test for assessment of fines of aggregates	SN EN 933-9 resp. SN 670 902-9
	Permeability tests - Geotechnical investigation and testing - Laboratory testing of soil	ISO 17892-11
	Test of swelling due to freeze and CBR test of soils after thaw (CBRF)	SN 670 321
	Determination of organic matter in soils	SN 670 370
	Test methods for the determination of the laboratory reference density and water content (unbound and hydraulically bound mixtures). Proctor compaction	SN EN 13286-2 resp. SN 670 330-2
	Test method for the determination of California Bearing ratio, immediate bearing index and linear swelling	SN EN 13286-47 resp. SN 670 330-47
	Qualification test for stabilisation with hydraulic binders according to norm: Hydraulically bound mixtures - Specifications - Part 1: Cement bound granular mixtures - Part 5: Hydraulic road binder bound mixtures	SN EN 14227-1 and 14227-5 resp. SN 640 496
Identification and classification of soil (USCS classification)	SN EN ISO 14688-1 resp. SN EN ISO 14688-2	
Determination of the water content of soils	SN EN ISO 17892-1 resp. SN 670 340-1	

1) Scope of accreditation type A (fix)

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Group of products or materials, field of activity	Principle of measurement ³⁾ (characteristics, measuring ranges, type of test)	Test methods, remarks (national, international standards, in-house test methods)
Soils, underground and rocks: in situ tests	EV and ME-plate bearing test (soils)	SN 670 317
	Determination of density of soil (nucleometer)	SN 670 335
Bituminous binders	Determination of the penetration index PI according to norm: Specifications for paving grade bitumen	SN EN 12591 resp. SN 670 202-NA
	Preparation of test samples	SN EN 12594 resp. SN 670 504
	Bitumen recovery: Rotary evaporator (toluol)	SN EN 12697-3
	Determination of the elastic recovery of modified bitumen	SN EN 13398 resp. SN 670 547
	Characterization of perceptible properties	SN EN 1425 resp. SN 670 503
	Determination of needle penetration	SN EN 1426 resp. SN 670 511
	Determination of softening point Ring and Ball method	SN EN 1427 resp. SN 670 512
Bituminous mixtures	Determination of layers adhesion (Leutner)	SN 670 461
	Soluble binder content determination of mix asphalt	SN EN 12697-1
	Determination of particle size distribution of bituminous mixtures	SN EN 12697-2
	Sampling bituminous mixtures	SN EN 12697-27 resp. SN 670 427
	Preparation of samples for determining binder content, water content and grading	SN EN 12697-28
	Determination of the dimensions of a bituminous specimen	SN EN 12697-29
	Specimen preparation by impact compactor	SN EN 12697-30
	Marshall test	SN EN 12697-34
	Method for the determination of the thickness of a bituminous pavement	SN EN 12697-36



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Road construction and waterproofing: in situ tests	Determination of the maximum density of bituminous mixtures	SN EN 12697-5
	Determination of bulk density of bituminous specimens	SN EN 12697-6
	Determination of void characteristics of bituminous specimens	SN EN 12697-8
	Peeling test (bituminous membranes)	SIA 281/2 resp. SN 564 281/2
	Determination of pull-off bond strength of bituminous membranes	SIA 281/3 resp. SN 573 281/3
Masonry units	Method for measurement of slip/skid resistance of a surface. The pendulum test - Road and air-field surface characteristics	SN EN 13036-4 resp. SN 640 512-4
	Determination of compressive strength	SN EN 772-1 resp. SIA 266.101
	Determination of water absorption due to capillary action	SN EN 772-11 resp. SIA 266.111
	Determination of freeze-thaw resistance of calcium silicate masonry units	SN EN 772-18 resp. SIA 266.118

In case of contradictions in the language versions of the directories, the German version shall apply.

The testing laboratory maintains a list with detailed information on the activities within the scope of accreditation. It is available upon request at the testing laboratory.

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