ICECON® ICECON S. A.

Since 1950

The Research Institute for Construction Equipment and Technology - ICECON S.A.Founded in 1995, ICECON S.A. continues the long tradition of 65 years of scientific research in construction in Romania, in the field of construction products, technologies, building services and technological equipment.

FIELDS OF ACTIVITY

- Research - Development - Innovation: materials, products, technologies, embedded equipment, technological equipment, environmental protection, waste management;

- Fundamental and applied research, studies, technical, economic, theoretical and experimental researches in the field of machinery, equipment, building services systems and technologies for civil engineering and communal services;

- Technical Regulations (standards, specifications, guidelines, norms, codes of practice and manuals), according to European documents for the construction industry;

- Assessment and verification of constancy of performance for construction products performed by a notified body, in accordance with Regulation (EU) no. 305/2011 (the AVPC system 3);

- Development of European Assessment Documents and European Technical Assessments for new construction products;

- Conformity assessment for construction by granting National Technical Approvals for construction products, equipment and technological procedures, building services , according to Romanian Quality in Construction Law;

- **Conformity assessment for equipment** according the Directives 2006/42/EC and 2000/14/EC (laboratory and in situ testing);

- Dedicated tests and technical analysis;

- **Service**: management, marketing, feasibility, impact and environmental assessment, evaluation studies;

- Experimental development;

- Micro-production

QUALIFICATIONS

ICECON S.A. is a notified body providing the assessment and verification of constancy of performance in the field of construction products (Notified Body Number 1803) and European Technical Assessment body for construction products (in accordance with Regulation (EU) no. 305/2011, as amended by Regulation Delegate (EU) no. 574/2014 and Commission Delegated Regulation (EU) no. 568/2014) .

ICECON S.A. OFFER

- Basic and applied research, studies, technical theoretical and experimental research, technical regulations, internships, training and management courses, publications editing, in the following areas of expertise:

• construction products and materials;
• dynamic analysis of building structures, building services, equipment and machinery;
• building services equipment;
• embedded equipment in construction;
• mechanical equipment for the protection of human and material valuables;
• machines, technological equipment for construction works, communal service sand environmental protection;
• laboratory equipment for construction and environmental protection;
• mechanized technologies for civil works, roads, airports and engineering works;
• construction products and components manufacturing technologies;
• materials recovery and recycling technologies.

- Experimental development (designs, experimental models and prototypes).

- Conformity assessment of products, equipment and technological procedures for constructions, building services, roads, airports and engineering works.

- Assessment and verification of constancy of performance of construction products, in the harmonised domain (by the ICECON TEST Laboratory, notified according to Regulation (EU) no. 305/2011).

- Development of European Assessment Documents for new construction products, performed by a notified Technical Assessments Body (according to Regulation (EU) no. 305/2011).

- **Services**:

• technical consultancy for construction works and technologies;

• performance and durability assessment:

- materials;
- structural systems;
- protections,

• specialized technical expertise:

- constructions degradation evaluation;
- "in situ" evaluation for protection systems applied to the surface of building elements;
- buildings thermal performances evaluation,

•technical assistanpoi ce in the field of construction, building services, infrastructures (roads, airports, ports, engineering works).

• small series of in construction products.

RESEARCH DEPARTMENTS

- Dynamic behaviour of structural systems

Areas of expertise:

- earthquake and anti-vibrations protection
- instrumental and computer systems
- stands and testing equipment design

- Development - Innovation - Conformity assessment of new construction products

Areas of expertise:

- buildings, roads, bridges, airports
- equipment and building services
- timber structures and wood construction products
- protections for constructions
- assessment and verification of constancy of performance, for new construction products

- Laboratory and in "situ" tests, - ICECON TEST Laboratory

Authorization, accreditation, recognition

• Notified according the Regulation (EU) no. 305/2011, **NB in 1803**, as a testing laboratory for assessment and verification of constancy of performance of construction products, (system 3).

• Accredited according to EN 17025: 2005 by the Romanian Accreditation Body (accreditation certificate no. OC 020 of 19/5/2014), as a competent body to carry out specific third party tasks for the assessment and

verification of constancy of performance of construction products under Regulation (EU) no. 305/2011.

• Accredited according to EN 17025: 2005 by the Romanian Accreditation Body (accreditation certificate no. LI 779/01.06.2009), as a competent body to carry out testing activities.

• Authorized by the Romanian State Construction Inspectorate as a "First Degree Laboratory" (authorization no. 3126 / 04.03.2016).

• Authorized by the Romanian Transport Ministry, Romanian Railway Authority – AFER (authorization series: AL Nr. 423/2012-R2 3126 / 04.03.2016), as a testing laboratory for construction products.

Area of competence

• tests according European standards on construction products, elements, structures and engineering works;

• tests according European standards on building services materials, products and equipment, as well as embedded equipment;

• tests according European standards on equipment and machines for construction works and communal services;

• tests according to customers requirements and specifications;

• technological development

Testing groups:

- LIA – Testing group for mineral aggregates
- LETICS - Testing group for external thermal insulation composite systems
- LIN – Testing group for non destructive tests on concrete structures
- LIP – Testing group for floorings
- LIF – Testing group for interior and exterior finishing works based on plasters and paints
- LIR - Testing group for materials used in road structures
- PSL - Testing group for wooden structures and products
- TEST – Testing group for construction and communal services equipment and machines, as well as for building services products
- LDN – Testing group for harmful agents: dust, gas, powder (particulate)
- LAU – Testing group for noise and vibration parameters
- PTCI- Testing group for thermal power of heating radiators (interior use)

Accredited and authorized tests on the following types of products:

- concrete, cement, plastics, wood and metal (physical and mechanical tests);
- ready to use products for construction;
- construction and mechanical equipment (noise and vibration parameters determination);
- reinforcing steel bars, fibres and meshes;
- reinforced, precast and prestressed concrete;
- mineral aggregates;
- road, railway and airport runways;
- embedded equipment in construction;
- pavement elements;
- finishing works;
- geosynthetics;
- waterproofing, thermal and sound insulation;
- heating appliances;
- sanitary plumbing;
- electric power systems and devices in buildings
- ceramic products used in construction;
- mortar for plastering and masonry;
- construction precast elements;
- timber and wood constructions;
- protection materials and systems against corrosive agents;
- buildings and constructions (tests for the expert examination, non-destructive and sampling tests for the behaviour control.

- Regional Departments: Brăila, Cluj-Napoca, Timişoara

- Functional Departments:

- Economic Management
- Management Research - Development – Innovation
- Maintenance and Logistics

ICECON TEST testing Laboratory

Bucureşti, Şos. Pantelimon nr. 266, sector 2

belonging to The Research Institute for Construction Equipment and Technology - ICECON S.A.

Item no.	Test type / name	Material/product	Reference document
	TEST laboratory		
	Machines and equipment		
	Mechanical tests		
1.	Determination of resistance to burglary	Safes, ATM safes, strongroom doors and strongrooms	EN 1143-1
		Secure safe cabinets	EN 14450, clause 7; 8
2.	Determination of resistance: - under static loading - under dynamic loading - to manual burglary attempts	Pedestrian doorsets, windows, curtain walling, grilles and shutters -	EN 1628 EN 1629 EN 1630
3.	Determination of compression and shear characteristics: - Shear modulus testing - Shear bond strength testing - Compression stiffness	Structural Bearings	EN 1337-3, Annexes: F,G,H, M, clauses :4.3.1; 4.3.2; 4.3.7; 4.3.3 EN 1337-3
4.	Determination of compression and shear characteristics: - Evaluation of the force-displacement cycle - Service Load Test - Break-away Test - Pressure Test	Anti-seismic devices	EN 15129, clauses 8.2.4.1.5; 6.4.4; 5.2.4.2 ; 5.2.4.4; 5.3.4.2; 7.4.2.2. EN 15129
5.	Repeated loading in compression strenght	Structural Bearings / Type A; B; C; D; E; F elastomeric bearings	EN 1337-3, clause 4.3.4. and Annex I
6.	Static rotation capability. Eccentric loading test	Structural Bearings elastomeric bearings / type A; B; C; D; E; F	EN 1337-3, clause. 4.3.5.2 and Annex J

Item no.	Test type / name	Material/product	Reference document
7.	Static rotation capability. Restoring moment test	Structural Bearings / Type A; B; C; D; E; F elastomeric bearings	EN 1337-3, clauses 4.3.5.3 and Annex K
8.	Cross-cut test	Structural Bearings / Type A; B; C; D; E; F elastomeric bearings Paints and varnishes	EN 1337-3 EN 1337-9, clause 4.1.1.1. EN ISO 2409
9.	Determination of hardness. Rapid-deformation (impact resistance) tests	Structural Bearings / Type A; B; C; D; E; F elastomeric bearings Paints and varnishes	EN 1337-3 EN 1337-9, clause 4.1.1.1. EN ISO 6272-1
10.	Fatigue Test	Fuse Restraints	EN 15129, clause 5.2.4.3.
11.	Low velocity test	Temporary (dynamic) connection devices	EN 15129, clause 5.3.4.3.
12.	Seal Wear Test	Temporary (dynamic) connection devices	EN 15129, clause 5.3.4.4.
13.	Impulsive Load Test	Temporary (dynamic) connection devices	EN 15129, clause 5.3.4.5.
14.	Overload Test	Temporary (dynamic) connection devices	EN 15129, clause 5.3.4.6.
15.	Cyclic Load Test	Temporary (dynamic) connection devices	EN 15129, clause 5.3.4.7.
16.	Low velocity test	Velocity Dependent Devices Fluid Viscous Dampers Fluid Spring Damper	EN 15129, clause 7.4.2.3 EN 15129, clause 7.4.2.4
17.	Constitutive law test	Velocity Dependent Devices; Fluid Viscous Dampers Fluid Spring Damper	EN 15129, clause 7.4.2.5. EN 15129, clause 7.4.2.6
18.	Damping efficiency test	Velocity Dependent Devices; Fluid Viscous Dampers Fluid Spring Damper	EN 15129, clause 7.4.2.7.

Item no.	Test type / name	Material/product	Reference document
19.	Wind load cycle test	Velocity Dependent Devices; Fluid Viscous Dampers Fluid Spring Damper;	EN 15129, clause 7.4.2.8.
20.	Seal wear test	Velocity Dependent Devices; Fluid Viscous Dampers Fluid Spring Damper	EN 15129, clause 7.4.2.9. EN 15129
21.	Stroke Vchecking test	Velocity Dependent Devices; Fluid Viscous Dampers Fluid Spring Damper	EN 15129, clause 7.4.2.10. EN 15129
22.	Load bearing capacity	Sliders with curved surface and flat surface	EN 15129, clause 8.3.4.1.2. EN 15129
23.	Frictional resistant force under service conditions	Sliders with curved surface and flat surface	EN 15129, clause 8.3.4.1.3.
24.	Sliding isolation tests	Sliders with curved surface and flat surface	EN 15129, clause 8.3.4.1.5.
25.	Determination of hardness. Ball indentation method	Plastics , hard rubber and composites	EN ISO 2039-1
26.	Determination of crushing resistance	Small wastewater treatment systems for up to 50 PT	EN 12566-3, clause 6.2.1; 6.2.2; Annex C
27.	Determination of durability	Small wastewater treatment systems for up to 50 PT	EN 12566-3, clause 6.5
		Prefabricated septic tanks	EN 12566-1, clause 5.8 EN 12566-1
		Septic tanks assembled in situ from prefabricated kits	EN 12566-4, clause 5

Item no.	Test type / name	Material/product	Reference document
	Building services equipment		
	Physical tests		
28.	Treatment efficiency equipments of domestic and industrial wastewater	Wastewater treatment plants Grease separators Separators for light liquids	EN 12566-3, clause 6.3 EN 858-1, clause 8.3.3.1.3 EN 858-1 EN 1825-1 EN 1825-1, clause 8.5.1.4
29.	Determination of heating power and heating efficiency for appliances fired by solid fuels	Roomheaters fired by solid fuel Inset appliances including open fires fired by solid fuels	EN 13240, clause A 6.2.2; A 6.2.1. EN 13240 EN 13229, clause A 6.2.1; A 6.2.2 EN 13229
30.	Power determination of heating and efficiency heating for residential cookers fired by solid fuel	Residential cookers fired by solid fuel	EN 12815, clause A 6.2.1, A 6.2.2 EN 12815
31.	Treatment efficiency for small wastewater treatment systems up to 50 PT	Prefabricated septic tank Septic tanks assembled in situ from prefabricated kits	EN 12566-1 EN 12566-1, clause 5.5. EN 12566-4, clause 6.3.
32.	Determination of heating power and efficiency for residential household boiler fired by solid fuel (heating power up to 50 kW)	Residential independent boilers fired by solid fuel - Nominal heat output up to 50 kW	EN 12809, clause 6.1.; 6.2. EN 12809
33.	Determination of treatment capacity	Prefabricated septic tank	EN 12566-1, clause 3.3; Annex A, clause A.1 EN 12566-1, clause 4.
		Septic tanks assembled in situ from prefabricated kits	EN 12566-4, clause 4
34.	Determination of exploitation safety	Roomheaters fired by solid fuel	EN 13240, clause A 4.7; A 4.9 EN 13240

Item no.	Test type / name	Material/product	Reference document
		Inset appliances including open fires fired by solid fuels	EN 13229, clause A 4.7 EN 13229
		Residential independent boilers fired by solid fuel - Nominal heat output up to 50 kW	EN 12809, clause A 4.7 EN 12809
		Residential cookers fired by solid fuel	EN 12815, clause A 4.9; A 4.10; A 4.11; A 4.16 EN 12815
35.	Determination of emissions from flue gases (O2, CO, CO2) and flue gas temperature	Roomheaters fired by solid fuel	EN 13240, clause A 4.7; A 4.9.1; A 4.9.3 EN 13240
		Inset appliances including open fires fired by solid fuels	EN 13229, clause A 4.7; A 4.8; A 4.9.4; A 6.2.8. EN 13229
		Residential independent boilers fired by solid fuel - Nominal heat output up to 50 kW	EN 12809, clause A 4.7; A 4.9 EN 12809
		Residential cookers fired by solid fuel	EN 12815, clause A 4.9; A 4.15; A 6.2.8.; A 6.2.6. EN 12815
36.	Determination of surface temperature	Roomheaters fired by solid fuel	EN 13240, clause A 4.7; A 4.9. EN 13240
		Inset appliances including open fires fired by solid fuels	EN 13229, clause A 4.7; A 4.9; A 4.9.6 EN 13229
		Residential independent boilers fired by solid fuel - Nominal heat output up to 50 kW	EN 12809, clause A 4.7. EN 12809
		Residential cookers fired by solid fuel	EN 12815, clause A 4.9; A 4.10; A 4.11; A 4.16. EN 12815

Item no.	Test type / name	Material/product	Reference document
	Mechanical tests		
37.	Watertightness for domestic and industrial wastewater equipments	Septic tanks Septic tanks assembled in situ from prefabricated kits Wastewater treatment plants Separators for light liquids Grease separators	EN 12566-1 EN 12566-1, clause 5.3. EN 12566-4, clause 5.3. EN 12566-3 EN 858-1 EN 858-1, clause 6.3.2 EN 1825-1, clause 5.3.2. EN 1825-1
38.	Crushing resistance for domestic and industrial wastewater equipments	Septic tanks Septic tanks assembled in situ from prefabricated kits Wastewater treatment plants Separators for light liquids Grease separators	EN 12566-1 EN 12566-1, clause 5.2.4. EN 12566-3 EN 12566-4, clause 5.2. EN 858-1 EN 858-1, clause 6.4. EN 1825-1 EN 1825-1, clause5.4.
39.	Corrugated safety metal hose assemblies for the connection of domestic appliances using gaseous fuels	Metal hose corrugated safety for gaseous fuel	EN 14800, clause 5.17; 5.4; 5.19.2.1; 5.19.2.2.; 5.7.2, 5.3.2
40.	Size, tensile strength and elongation determination for copper pipes	Copper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications	EN 1057, clause7.3.; 7.2.
	Concrete and cement		
	Phsycal tests		
41.	Density of hardened concrete	Hardened concrete	EN 12390-7
42.	Determination of water penetration depth under pressure	Hardened concrete	EN 12390-8
	Mechanical tests		
43.	Compressive strength of test specimens	Hardened concrete	EN 12390-3

Item no.	Test type / name	Material/product	Reference document
44.	Tensile splitting strength of test specimens	Hardened concrete	EN 12390-6
45.	Flexural strength of test specimens	Hardened concrete	EN 12390-5
46.	Concrete strength determination in structures using cores Compressive strength of test specimens (cores)	Hardened concrete	EN 12504-1 EN 13791
47.	Determination of the freeze-thawing resistance	Hardened concrete	EN 12390-3 SR 3518
48.	Determination of mechanical strength	Cement	EN 196-1
	Chemical tests		
49.	Determination of setting times	Cement	EN 196-3
50.	Determination of soundness	Cement	EN 196-3
	Metallic materials		
	Mechanical tests		
51.	Tensile testing	Metallic materials	EN ISO 6892-1
52.	Tensile strength d etermination of wire	Metallic materials	EN ISO 6892-1
53.	Tensile testing of welded meshes (reinforcied meshes)	Metallic materials	EN ISO 6892-1
54.	Determination of the weld shear force (reinforcing meshes welded knot)	Metallic materials	EN ISO 15630-2
55.	Plastic deformation capacity determination. Bend test	Metallic materials	EN ISO 7438
56.	Tensile test	Steel for the reinforcement of concrete. Reinforcement couples for mechanical splices for bars	SR 13515-2, clause 5.3. (ISO 15835-2: 2009)
57.	Slip test	Steel for the reinforcement of concrete. Reinforcement couples for mechanical splices for bars	SR 13515-2, clause 5.4.1 (ISO 15835-2: 2009)

Item no.	Test type / name	Material/product	Reference document
58.	High-cycle fatigue test	Steel for the reinforcement of concrete. Reinforcement couples for mechanical splices for bars	SR 13515-2, clause 5.5 (ISO 15835-2: 2009)
59.	High stress testing (in elastic domain) with a small number of cycles in mechanical joining	Steel for the reinforcement of concrete. Reinforcement couples for mechanical splices for bars	SR 13515-2, clause 5.6.1 (ISO 15835-2: 2009)
60.	Large deformation testing with a small number of cycles in mechanical joining	Steel for the reinforcement of concrete. Reinforcement couples for mechanical splices for bars	SR 13515-2, clause 5.6.2 (ISO 15835-2: 2009)
	Pavement elements (blocks, flags, kerbs); natural stone, concrete		
	Dimensional determinations		
61.	Determining the size and aspect of concrete products	Concrete paving blocks, Concrete paving flags, Concrete kerb units	EN 1338 EN 1339 EN 1340
	Physical tests		
62.	Determination of water absorption for concrete products	Concrete paving blocks, Concrete paving flags, Concrete kerb units	EN 1338 EN 1339 EN 1340
63.	Determination of water absorption coefficient by capillarity	Natural stone	EN 1925
	Mechanical tests		
64.	Determination of freeze-thaw resistance of concrete products	Concrete paving blocks, Concrete paving flags, Concrete kerb units	EN 1338 EN 1339 EN 1340
65.	Determination of abrasion resistance for concrete products	Concrete paving blocks, Concrete paving flags, Concrete kerb units	EN 1338 EN 1339 EN 1340

Item no.	Test type / name	Material/product	Reference document
66.	Determination of splitting tensile strength for concrete products	Concrete paving blocks, Concrete paving flags, Concrete kerb units	EN 1338 EN 1339 EN 1340
	Adhesives		
67.	Determination of tensile adhesion strength for cementitious adhesives	Adhesives for ceramic tiles	EN 1348
68.	Determination of open time	Adhesives for ceramic tiles	EN 1346
	Plastics; door sets, windows		
	Dimentional tests		
69.	Method of measurement for height and width	Door sets	EN 951
	Physical tests		
70.	Determination of tensile properties: stress, strain, tensile modulus	Plastics	EN ISO 527-1, clauses 10.1, 10.2, 10.3
71.	Methods for determining the density of non-cellular plastics	Plastics	EN ISO 1183-1
72.	Determination of heat reversion	Unplasticized polyvinylchloride (PVC-U) profiles	EN 479
73.	Determination of appearance, dimensions, profiles mass	Unplasticized polyvinylchloride (PVC-U) profiles	EN 12608, clause 6.1, 6.2, 6.3
74.	Water tightness	Windows and doors	EN 1027
75.	Air permeability	Windows and doors	EN 1026
	Mechanical tests		
76.	Determination of the strength of welded corners and T-joints	Unplasticized polyvinylchloride (PVC-U) profiles	EN 514
77.	Soft and heavy body impact	Windows	EN 13049
78.	Determination of the resistance to soft and heavy body impact for doors	Doors	EN 949
79.	Determination of the resistance to static torsion	Windows	EN 14609

Item no.	Test type / name	Material/product	Reference document
80.	Determination of the resistance to static torsion	Doors	EN 948
81.	Resistance to wind load	Windows and doors	EN 12211
	Wood / Timber structures		
	Mechanical tests		
82.	Determination of bending strength	Timber structures. Structural timber and glued laminated timber	EN 408
83.	Determination of compression strengths perpendicular to the grain	Timber structures. Structural timber and glued laminated timber	EN 408
84.	Determination of tension strengths perpendicular to the grain	Timber structures. Structural timber and glued laminated timber	EN 408
	Panels		
	Physical tests		
85.	Durability testing methods	Self-supporting double skin metal faced insulating panels	EN 14509 Annex B (clause B2; B3)
	Mechanical tests		
86.	Shear test	Self-supporting double skin metal faced insulating panels	EN 14509, Annex A (clause A3)
87.	Bending moment capacity over a central support	Self-supporting double skin metal faced insulating panels	EN 14509, Annex A (clause A7)
	Geotextiles, geosynthetics		
	Physical tets		
88.	Test method for the determination of mass per unit area of geotextiles and geotextile-related products	Geosynthetics	EN ISO 9864
	Mechanical tests		
89.	Wide-width tensile test	Geosynthetics	EN ISO 10319

Item no.	Test type / name	Material/product	Reference document
90.	Static puncture test (CBR test)	Geosynthetics	EN ISO 12236
91.	Determination of the resistance to weathering	Geotextiles and geotextile-related products	EN 12224
	LIA - Laboratory		
	Mineral aggregates		
	Dimensional tests		
92.	Determination of particle size distribution - Sieving method	Mineral aggregates	EN 933-1
93.	Determination of particle shape - Flakiness index	Mineral aggregates	EN 933-3
94.	Determination of particle shape - Shape index	Mineral aggregates	EN 933-4
	Physical tests		
95.	Assessment of fines - Sand equivalent test	Mineral aggregates	EN 933-8
96.	Determination of particle density and water absorption	Mineral aggregates	EN 1097-6
97.	Determination of resistance to freezing and thawing	Mineral aggregates	EN 1367-1
	Mechanical tests		
98.	Determination of the resistance to wear (micro-Deval)	Mineral aggregates	EN 1097-1
99.	Methods for the determination of resistance to fragmentation (Los-Angeles method)	Mineral aggregates	EN 1097-2
100.	Determination of uniaxial compressive strength	Natural stone	EN 1926
	LIF – Laboratory		
	Building finishing materials		
	Dimensional tests		
101.	Determination of film thickness	Paints and varnishes	EN ISO 2808, clause 7C; 7D

Item no.	Test type / name	Material/product	Reference document
	Physical tests		
102.	Determination of water vapour permeability of hardened rendering and plastering mortars	Mortars	EN 1015-19
103.	Determination of water absorption coefficient due to capillary action of hardened mortar	Mortars	EN 1015-18
104.	Determination of dry bulk density of hardened mortar	Mortars	EN 1015-10
105.	Determination of liquid water permeability	Paints and varnishes	EN 1062-3
106.	Artificial aging and exposure to artificial radiation	Paints and varnishes	EN ISO 16474-2 EN ISO 16474-1
107.	Exposure of coatings to artificial weathering. Exposure to fluorescent UV lamps and water	Paints and varnishes	EN ISO 16474-1 EN ISO 16474-3
108.	Determination of density	Paints and varnishes	EN ISO 2811-1
109.	Determination of film thickness	Paints and varnishes	EN ISO 2808, method 4A
110.	Determination of coating thickness Magnetic method	Metallic coating	EN ISO 2178
	Mechanical tests		
111.	Determination of adhesive strength of hardened rendering and plastering mortars on substrates	Hardened mortar	EN 1015-12
112.	Determination of flexural and compressive strength of hardened mortar	Hardened mortar	EN 1015-11
113.	Pull-off test for adhesion	Paints and varnishes	EN ISO 4624
114.	Determination of wet-scrub resistance and cleanability of coatings	Paints and varnishes	EN ISO 11998
115.	Bend test (cylindrical mandrel)	Paints and varnishes	EN ISO 1519

Item no.	Test type / name	Material/product	Reference document
	Chemical tests		
116.	Corrosion tests in artificial atmospheres. Salt spray tests	Paints and varnishes	EN ISO 9227
117.	Determination of non-volatile-matter content	Paints and varnishes	EN ISO 3251
	LIP – Laboratory		
	Building floorings		
	Physical tests		
118.	Determination of water absorption, apparent porosity, apparent relative density and bulk density	Ceramic tiles	EN ISO 10545-3
119.	Determination of frost resistance	Ceramic tiles	EN ISO 10545-12
	Mechanical tests		
120.	Determination of flexural and compressive strength	Screed materials	EN 13892-2
121.	Determination of bond strength	Screed materials	EN 13892-8
122.	Determination of wear resistance-Böhme	Screed materials	EN 13892-3
	Chemical tests		
123.	Determination of resistance to stains	Ceramic tiles	EN ISO 10545-14
	LETICS - Laboratory		
	External thermal insulation composite systems.		
	Physical tests		
124.	Determination of the thermal resistance by means of heat flow meter methods. Products of high and medium thermal resistance	Thermal insulation materials	EN 12667, clause 7.3.5.2
125.	Determination of the apparent density	Thermal insulation materials	EN 1602
126.	Determination of dimensional stability under specified temperature and humidity conditions	Thermal insulation materials	EN 1604
127.	Determination of water absorbtion	Thermal insulation materials	EN 1609 EN 12087

Item no.	Test type / name	Material/product	Reference document
128.	Determination of water vapour transmission properties	Thermal insulation materials	EN 12086
129.	Determination of freeze-thaw resistance	Thermal insulation materials	EN 12091
	Mechanical tests		
130.	Determination of the resistance to impact of external thermal insulation composite systems (ETICS)	Insulating products	EN 13497
131.	Determination of the resistance to penetration of external thermal insulation composite systems (ETICS)	Insulating products	EN 13498
132.	Determination of the tensile bond strength of the adhesive and of the base coat to the thermal insulation material	Insulating products	EN 13494
133.	Determination of tensile strength perpendicular to faces	Thermal insulation products	EN 1607
134.	Determination of bending behaviour	Thermal insulation products	EN 12089
135.	Determination of compression behaviour	Thermal insulation materials	EN 826
	LIR - Laboratory		
	Road structures materials		
	Physical tests		
136.	Determination of the softening point	Bitumen	EN 1427
137.	Determination of bulk density of bituminous specimens	Bituminous mixtures	EN 12697-6 EN 12697-29
138.	Determination of Engler pseudo-viscosity of bitumen emulsions	Bitumen emulsions	SR 8877-2
139.	Determination of particle size distribution	Bituminous mixtures	EN 12697-2
	Mechanical tests		
140.	Wheel tracking determination	Bituminous mixtures	EN 12697-22

Item no.	Test type / name	Material/product	Reference document
141.	Stiffness determination	Bituminous mixtures	EN 12697-26
142.	Resistance to fatigue determination	Bituminous mixtures	EN 12697-24
143.	Determination of resistance of bituminous mixtures to permanent deformation by cyclic compression tests	Bituminous mixtures	EN 12697-25
144.	Marshall test	Bituminous mixtures	EN 12697-34
	Chemical tests		
145.	Determination of soluble binder content	Bituminous mixtures	EN 12697-1 EN 12697-28
	LAU - Laboratory		
	Tests for noise and vibration parameters		
	Acoustic tests		
146.	Determination the vibration level in building and construction equipment	Construction and construction elements Machinery and construction equipment	STAS 12025/1 ISO 2631-1 ISO 2631-2
147.	Determination of noise level emitted in the environment and at the command post: - Determining the level of noise in building; - Determination of noise level in urban areas; - Determination of the reverberation time in premises of buildings; - Determination of occupational noise exposure; - Determination of the noise emitted by machinery and equipment.	Construction and construction elements Machinery and construction equipment	SR 6161-1 STAS 6161/3 STAS 6691 ISO 1999 EN ISO 11200
148.	Determination the vibration level transmitted though hand – arm system (Measurement and evaluation of human exposure to hand-transmitted vibration)	Machinery and construction equipment	EN ISO 5349-1 EN ISO 5349-2 EN ISO 5349-2

Item no.	Test type / name	Material/product	Reference document
149.	Determiniation of vibration level transmitted through the seat (Laboratory evaluation of operator seat vibration)	Machinery and construction equipment Earth-moving machinery	ISO 2631-1 EN ISO 7096 EN ISO 7096
150.	Measurement and evaluation of acoustic parameters for airborne and impact sound insulation from of building elements: - field measurements of airborne sound insulation between rooms; - laboratory measurement of airborne sound insulation of separating elements; - evaluation of airborne and impact sound insulation of buildings and building elements.	Construction and construction elements	EN ISO 16283-1 EN ISO 10140-2 SR 6161-2 EN ISO 717-1 EN ISO 717-2
151.	In situ field measurement of sound parameters for facade airborne sound insulation (Field measurement of sound insulation in buildings and of building elements)	Construction elements	ISO 16283-3
152.	Measurement of acoustic parameters for determining environmental noise: - determination of noise levels in urban areas; - determination of noise levels in industry; - measurement and assessment of environmental noise.	Environment	STAS 6161/3 STAS 7150 ISO 1996-1 ISO 1996-1 ISO 1996-2 ISO 1996-2
153.	Measurement of acoustic parameters of materials. Sound absorption coefficient and impedance in impedances tubes	Building materials	EN ISO 10534-1 EN ISO 10534-2

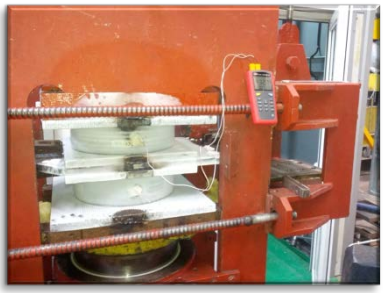
Item no.	Test type / name	Material/product	Reference document
154.	Determination of sound power level of noise sources	Machinery and construction equipment	EN ISO 3744 EN ISO 3746
	PSL- Laboratory		
	Timber structure, wood products		
	Biological tests		
155.	Determination of wood antiseptization efficiency against mouldiness	Wood protection product	STAS 8022
156.	Determination of preventive effectiveness of processed wood protection to blue staining fungus	Wood protection product	SR 13154
157.	Determination of protective effectiveness against wood destroying basidiomycetes (rot fungus)	Wood protection product	EN 113 EN 113
158.	Determination of toxic values against Reticulitermes species (European termites) (Isoptera insects)	Wood protection product	EN 117
159.	Determination of natural durability of solid wood	Wood	EN 350-1
	Physical tests		
160.	Determination of hydrofuge substances effectiveness	Wood protection product	STAS 10787
161.	Determination of resistance to humidity (intermittent condensation)	Paints and varnishes	ISO 11503
162.	Natural weathering test	Paints and varnishes	EN 927-3 clause 4.7.2.
163.	Determination of preservative penetration class and retention of treated wood protection products	Wood treated	EN 351-1 EN 351-2
164.	Determination of flow time by use of flow cups	Paints and varnishes	EN ISO 2431
165.	Determination of density	Liquid petroleum product	SR EN ISO 3675 EN ISO 3675

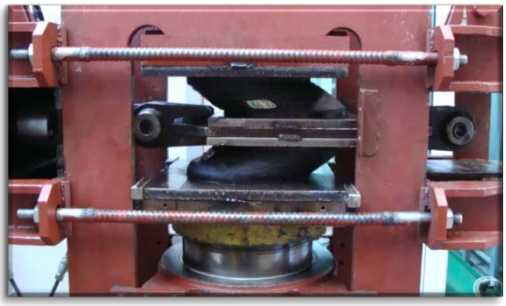
Item no.	Test type / name	Material/product	Reference document
	Electrochemical methods		
166.	Electrometric determination of aqueous solutions pH	Aqueous solutions	STAS 8619/3
	Fire Tests		
167.	Furniture. Assessment of the ignitability of upholstered furniture. Ignition source: smouldering cigarette	Cotton fibres - filling material for upholstery	EN 1021-1
168.	Furniture. Assessment of the ignitability of upholstered furniture. Ignition source: match flame equivalent	Cotton fibres - filling material for upholstery	SR EN 1021-2
169.	Determination of efficiency of fireproofing	Wood	SR 652

EXEMPLES OF TESTS PERFORMED BY THE ICECON TEST LABORATORY

EN 1337-3:2005, EN 1337-3:2005
Static rotation capability
Restoring moment test

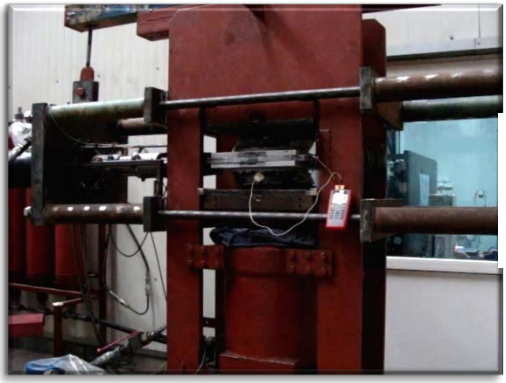
EN 15129:2009
Determination of the features compression and shear
Evaluation of force –





EN 15129:2009
Determination of the features
Compression and shear

EN 1337-3: 2005
Shear modulus testing (-20^0 C)

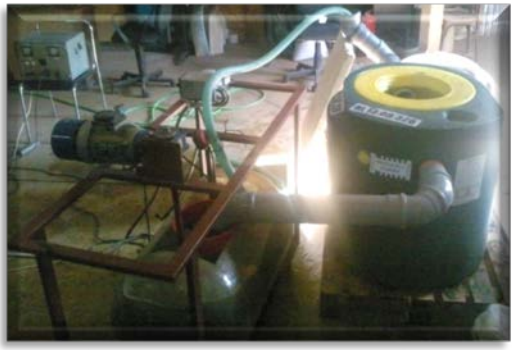


EN 15129:2009
Compression and shear test
Evaluation of force – displacement (+ 40^0 C)

EN 12566-3: 2005
Small wastewater treatment systems for up to 50 PT
Determination of crushing resistance

EN 12566-3: 2005
Small wastewater treatment systems for up to 50 PT – Efficiency test

EN 12566-1: 2000
IMHOFF septic tank for up to 50 PT – Efficiency test



EN 12566-1: 2000
IMHOFF septic tank for up to 50 PT – Efficiency test

EN 12566-1:2002
Crushing resistance for domestic and industrial wastewater equipments Structural behavior

EN 13240:2003
Room heaters fired by solid fuel - Requirements and test methods

EN 12815:2000
Power determination of heating and efficiency heating

EN ISO 527-1:2012 Plastics
Determination of tensile properties

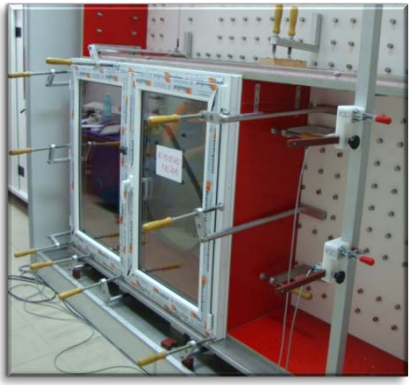
EN ISO 11507:2007 Paints and varnishes
Exposure of coatings to artificial weathering.
Exposure to fluorescent UV lamps and water.

EN ISO 9227:2012
Corrosion tests in artificial atmospheres. Salt spray tests

EN 12390-3:2009;
Hardened concrete
Compressive strength of test specimens

ISO 15835-2: 2009
Steel for the reinforcement of concrete. Reinforcement couples for mechanical splices for bars. Tensile test

EN 1026:2001
EN 1027:2001
Windows Water tightness Air permeability

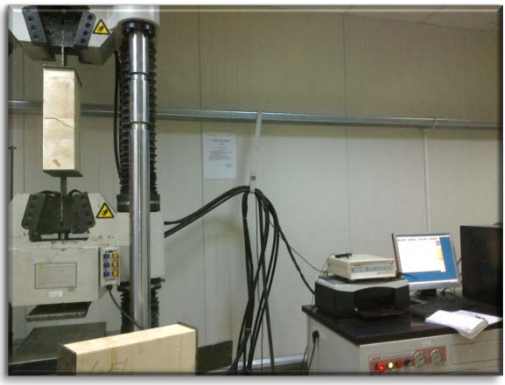


EN 1026:2001
EN 1027:2001
Doors Water tightness Air permeability

EN ISO 1183-1:2013
Plastics. Methods for determining the density of non-cellular plastics

EN 408+A1:2012
Timber structures.
Structural timber and glued laminated timber
Determination of bending strength

EN 408+A1:2012
Timber structures.
Structural timber and glued laminated timber
Determination of compression strengths perpendicular to the grain

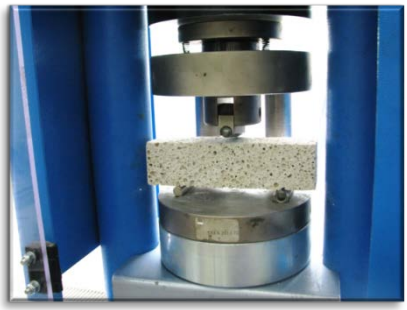


EN 408+A1:2012
Timber structures.
Structural timber and glued laminated timber Shear test

EN 1097-1:2011
Tests for mechanical and physical properties of aggregates - Part 1: Determination of the resistance to wear (micro-Deval)

EN 1097-8:2009
Tests for mechanical and physical properties of aggregates - Part 8: Determination of the polished stone value

EN ISO 11998:2006
Paints and varnishes – Determination of wet-scrub resistance and cleanability of coatings



EN 1015-11:2002
Determination of flexural strength of hardened mortar

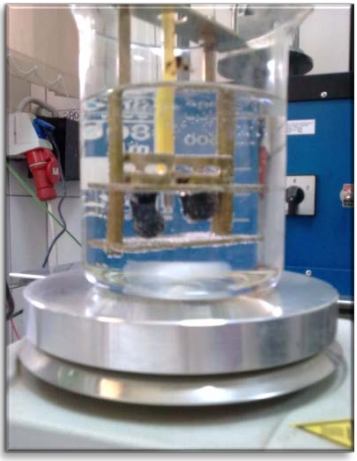
EN ISO 10545-6:2010
Ceramic tiles
Determination of resistance to deep abrasion for unglazed tiles

EN ISO 10545-3:1995
Ceramic tiles
Determination of water absorption, apparent porosity, apparent relative density and bulk density

EN 12667:2001
Thermal performance of building materials and products - Determination of thermal resistance by means of heat flow meter methods – Products of high and medium thermal resistance

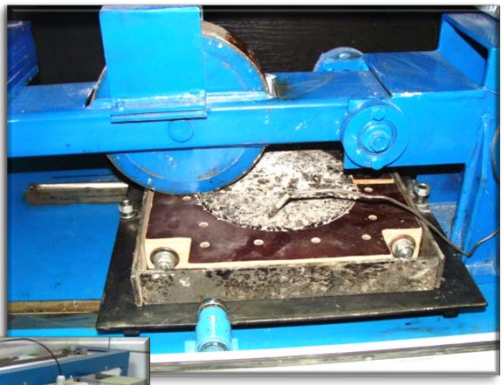
EN 826:1996
Thermal insulating products for buildings applications. Determination of compression behaviour

EN 1427:2007
Bitumen and bituminous binders – Determination of the softening point – Ring and Ball method



EN 826:2013
Thermal insulation materials
Determination of compression behaviour

EN 12697-22: 2007
Bituminous mixtures.
Test methods for hot mix asphalt. Wheel tracking



EN 12697-22: 2007
Bituminous mixtures.
Test methods for hot mix asphalt. Wheel tracking

EN 12697-25:2006
Bituminous mixtures
Cyclic compression test

EN ISO 10534-1:2002
Measurement of acoustic parameters of materials. Sound absorption coefficient and impedance in impedances tubes

EN ISO 3744:2010
Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure – Engineering methods for an essentially free field over a reflecting plane

ISO 10847:1997
ISO 7235:2003
Insertion loss and transmission loss for a noise silencer

EN ISO 717-1:2013
Laboratory measurement of airborne sound insulation of separating elements

ISO 2631-1:2001
ISO 2631-2: 2003
Determining the level of vibration in construction and construction equipment

EN ISO 8178-1:2006
EN ISO 8178- 2:2008
- Reciprocating internal combustion engines. Exhaust emission measurement.
Part 1: Test-bed measurement of gaseous and particulate exhaust emissions.
Part 2: Measurement of gaseous and particulate exhaust emissions at site

EN 50379–1: 2012
Specification for portable electrical apparatus designed to measure combustion flue gas parameters of heating appliances - Part 1: General requirements and test methods

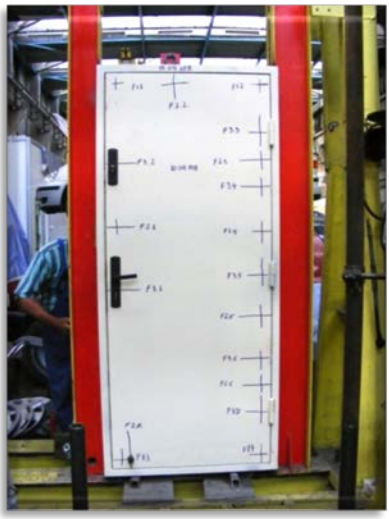
EN 12504-4 :2004
Testing concrete - Part 4: Determination of ultrasonic pulse velocity

EN 12504-2:2012
Testing concrete in structures. Part 2: Non-destructive testing - Determination of rebound number

EN 12810-2:2003
Façade scaffolds
Drop test

EN 1143-1: 2014
Burglary resistance test on safes

EN 356: 2003
Glass in building - Security glazing - Testing and classification of resistance against manual attack



EN 1627: 2011
Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance – Test for the determination of resistance under static loading

IN SITU TESTS

Static test on precast concrete beam, performed in a construction site, in Piteşti

Static and dymanic tests on a brige performed on the Transilvania highway

Static test on precast concrete beam performed in a construction site, in Tirgovişte

Static test on a bridge performed on the DN 1 Bucureşti – Ploieşti national road

Compacting tests performed on a pedestrian sidewalk in Târgu-Jiu

Test performed on the run-way structure
(tarmac), in the Iasi Airport

Static test performed on precast concrete beam in a construction site, in Cluj - Napoca

Structural vibrations monitoring in an old building Hotel Cişmigiu, Bucharest)

Static test performed on precast concrete beam in a construction site (Transilvania high-way)

Static test performed on a precast concrete beam in a precast elements factory

Impact test on a road restrain system (concrete safety barrier)