



**Testing &
Product Certification**



INTRODUCTION

CNE is a nationally recognised testing centre which operates under ISO/IEC 17025 accreditation by the Italian body SINAL – Sistema Nazionale per l'Accreditamento di Laboratori.

With modern facilities and state of the art equipment CNE performs a variety of physical, analytical and chemical tests on materials and products with specialisation in:

- *Metals, Alloys and Metal Products*
- *Coatings*
- *Construction Materials*
- *Welding*
- *Scaffolding*
- *Retro-Reflective Products*
- *Textile and Woven Fabrics*
- *Electrical Safety*



YOUR PARTNER IN QUALITY

Our customers include government and official institutions, industrial organisation, market control authorities, research and academic establishments.

CNE is in collaboration with other European accredited laboratories specialising in various fields of engineering and science, thus providing a comprehensive solution to its customers.



OUR FACILITIES

CNE operates from its privately owned testing facilities at the Ergates Industrial Estate on the out-skirt of the capital Nicosia. The modern laboratories occupy an area of 1000 square meters with controlled environmental conditions and automated test systems of the latest technology.

Tests are performed in accordance with international standards and documented procedures by engineers and technicians with years of experience and training.



Metals, Alloys and Metal Products

Test Type Materials/Products Tested	Test Description	Working Standards
Mechanical	Tensile properties (up to 1000 kN)	EN 10002-1 ¹ ASTM A370- 05
	Compression testing (up to 1500 kN)	
	Vickers hardness (up to 700 HV)	EN ISO 6507-1 ¹
	Impact (Izod, Charpy from -20 °C to ambient)	EN 10045-1 ² ASTM E23-05 ²
Chemical	Elemental analysis using OES (Ferrous alloys, cast iron, stainless steel, aluminium ...)	Documented procedures ²
	Elemental analysis using ICP and XRF (Lead, Tin and Zinc alloys, gold, silver ...)	Documented procedures ²
Physical	Specific gravity	Documented procedures
	Dimensional assessment (length, diameter, angle, squareness, flatness, roughness)	Documented procedures
Metallurgical	Macroscopic determination of grain flow	Documented procedures
	Case-hardened depth	ISO 2639
	Grain size	ASTM E112

Note (1). Test accredited by SINAL

Note (2). Test subcontracted

Coatings

Test Type Materials/Products Tested	Test Description	Working Standards
Physical (paints, galvanizing, nickel plated, epoxy)	Coating thickness – ultrasonic	EN ISO 2178 ASTM E376
	Coating thickness – microscopical	EN ISO 1463
Analytical (zinc coated articles)	Mass per unit area	EN ISO 1460 ¹ , EN 10142 ASTM A90
Chemical (all types of coatings)	Elemental analysis (XRF method)	Documented procedures ²
Corrosion	Salt spray resistance	ASTM B117 ²

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Note (2). Test subcontracted

Construction Materials

Test Type Materials/Products Tested	Test Description	Working Standards
Steel bars for reinforcement of concrete	Tensile properties	EN 10002-1 ¹ BS 4449 ¹ , EN 10087
	Rebend test	BS 4449 ¹ , EN 10087, DIN 488-1
	Chemical composition (elemental analysis with OES)	Documented procedures ²
Steel Fabric for reinforcement of concrete	Tensile properties, Rebend test	BS 4482, BS 4449
	Weld shear test	BS 4482
Bitumen sheet for roof waterproofing	Determination of thickness	EN 1849-1 ¹
	Determination of mass per unit area	EN 1849-1 ¹
	Determination of dimensional stability to heat	EN 1107-1
	Tensile properties	EN 12311-1 ¹
	Resistance to tear (nail shank)	EN 12310-1 ¹
	Tear resistance (method A,B)	UNI 8202-9
	Determination of flexibility at low temperature	EN 1109 ¹
	Softening point of bitumen materials (ring and ball method)	ASTM D 36, EN 1427
	Shear resistance of joints	EN 12317-1
	Peel resistance of joints	EN 12316-1
Manhole tops and gully tops	Design requirements	EN 124
	Load conformity (class A15 to D400)	EN 124 ¹
	Identification of casting material	Documented procedures ²
Steel Structural Hollow Sections	Dimensions, tolerances and sectional properties	EN 10219-2
	Tensile properties	EN 10002-1 ¹
	Chemical composition (elemental analysis with OES)	Documented procedures ²
Steel Wire and Wire products	Tensile properties, bend, hardness, dimensions and tolerances	EN 10218-1, EN 10218-2
Chain Link Fencing	Tensile properties and dimensions of steel wires and steel posts	AASHTO M181
Bolts, Screws and Studs	Tensile properties, hardness and dimensions	EN ISO 898-1
Steel Corrugated Sheet Beams & Posts for Guardrail	Tensile properties, chemical analysis and coating thickness	AASHTO M183

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Note (2). Test subcontracted

Welding

Test Type Materials/Products Tested	Test Description	Working Standards
Qualification Destructive testing to EN ISO 15614-1	Transverse tensile test	EN 895, EN 10002-1 ¹
	Bend test	EN 910
	Impact test (notch)	EN 875
	Hardness test	EN 1043-1
	Macroscopic and microscopic examination	EN 1321
Qualification Non-destructive testing to EN ISO 15614-1	Radiographic examination of welded joints	EN 1435 ²
	Ultrasonic examination	EN 1714 ²
	Magnetic particle examination	EN 1290 ²

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Scaffolding

Test Type Materials/Products Tested	Test Description	Working Standards
Platforms	Load support of platforms	EN 12811-1
Adjustable base jacks	Tensile properties of base plate	EN 12811-1, EN 74, EN 10002-1 ¹
	Compression load capacity of base jack	EN 12811-1
	Base plate dimensions	EN 74
	Coating properties (thickness, cross-cut)	EN 39, EN ISO 2409, EN ISO 2409
Friction type sleeve couplers, swivel couplers, right angle couplers	Load bearing capacity	EN 74
	Behaviour under specified loading	EN 74
	Torsional rigidity	EN 74
Scaffolding tubes	Chemical composition of base material	EN 39 Documented procedures ²
	Tensile properties	EN 12811-1, EN 39, EN 10002-1 ¹
	Tube flattening	EN 10233, EN 39
	Coating properties (thickness, cross-cut)	EN 39, EN ISO 2409, EN ISO 2409
Design	Structural Design for the assessment of prefabricated façade scaffold under service conditions and lateral stability for wind loading	EN 12810-1, EN 12810-2 EN 12811-1

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Retro-Reflective Products

Test Type Materials/Products Tested	Test Description	Working Standards
Fixed, vertical road traffic signs	Determination of retroreflectance	EN 12899-1, BS 873-6
	Determination of chromaticity coordinates under day and night light conditions	EN 12899-1, BS 873-6
	Dimensional requirements	EN 12899-1, BS 873-6
Plastic Posts (delineators)	Determination of retro reflectance of reflectors	EN 12899-3, EN 12899-1 ²
	Determination of chromaticity coordinates under day and night light conditions of post and reflectors	EN 12899-3, EN 12899-1
	Dimensional requirements	EN 12899-3, EN 12899-1
Road marking (Thermoplastic or Cold paints)	Determination of day and night visibility (on-site)	EN 1436
Road marking (Thermoplastic Paint)	Determination of chromaticity co-ordinates and luminance factor	EN 1871
	Cold Impact	EN 1871
	Softening Point	EN 1871
High Visibility Warning Clothing	Determination of retroreflectance	EN 471 ²
	Determination of chromaticity co-ordinates and luminance factor	EN 471
	Determination of physical properties (tensile, bursting, dimensional change to washing and dry cleaning)	EN 471
	Determination of colour fastness properties (light, rubbing, perspiration, dry cleaning, hot-pressing and bleaching)	EN 471

Plastic Materials and Products

Test Type Materials/Products Tested	Test Description	Working Standards
Plastic Materials	Determination of tensile strength	EN 2747, BS 2782 Method 110
	Determination of flexural properties	EN ISO 178
	Determination of shear strength	EN ISO 14130
	Determination of compressive properties	EN ISO 604
Plastic Pipes & Fittings	Determination of dimensions, Impact test and VICAT	EN 1401-1
	Determination of uPVC pipe water absorption	DIN 8061

Textiles Laboratory

Woven, Elastic, Coated and Knitted Fabrics

Test Type Materials/Products Tested	Test Description	Working Standards
Physical Tests	Fabric width	EN 1773
	Mass per unit area	BS 2471, EN 12127 ¹
	Thickness of fabric	EN ISO 5084 ¹
	Yarn Count	ISO 7211-3
	Weave	ISO 7211-1, BS 2861
	Fibre Fineness	BS 2043
	No of Threads per cm	EN 1049-2
	Tensile strength and elongation (strip and grab method)	EN ISO 13934 Part 1 ¹ , 2
	Abrasion (Martindale)	EN ISO 12947 Parts 1 ¹ to 4
	Tear strength (single tear, wing rip method and double tear method)	EN ISO 13937 Parts 2,3 ² ,4
	Pilling resistance	EN ISO 12945-1 ¹
	Dimensional change in washing and drying	EN ISO 6330, EN 25077
	Dimensional stability (immersion in water)	BS 4736
	Bursting strength	EN ISO 13938-1 ¹
	Spray rating	EN 24920 ¹
	Resistance of water penetration - Hydrostatic Pressure	EN 20811
	Flammability of Fabrics	EN ISO 6940 ² , EN ISO 6941 ²
	Flammability of bed covers and pillows	BS 7175 ²
	Flammability of Polyurethane Foam for Furniture	BS 5852-2 ²
	Chromaticity Co-ordinates and luminance factor	Documented procedures
PANTONE Colour	Catalogue «PANTONE for fashion and Home» (color selector cotton)	

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Note (2). Test subcontracted

Woven, Elastic, Coated and Knitted Fabrics

Test Type Materials/Products Tested	Test Description	Working Standards
Colour fastness tests	Washing and laundering	EN ISO 105-C01 to C06 ¹
	Wet and dry rubbing	EN ISO 105-X12 ¹
	Dry cleaning	EN ISO 105-D01 ¹
	Aqueous agencies (water, sea water, chlorinated water, perspiration, hot water)	EN ISO 105-E01 to E04, E08
	Spotting – aqueous agencies (acid, alkali, water)	EN ISO 105-E05 to E07
	Bleaching agencies (hypochlorite, peroxide, sodium chloride)	EN ISO 105-N01 to N04 ²
	Hot pressing	EN ISO 105-X11 ²
	Artificial Light: Xenon Arc	EN ISO 105-B02 ²
Chemical tests	Quantitative analysis of fibre mixtures	BS 4407
	Chemical analysis of plastic and rubber materials	Documented procedures
	Content of banned amines in azo dyes based on the requirements of EC Directives 2002/61/EC & 76/769/EC	EN 14362-1&2:2003 & In House test methods ²
	Determination of Resistance to Microbiological Deterioration	BS 6085 ²

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Electrical Laboratory

Test Type Materials/Products Tested	Test Description	Working Standards
Conduit systems for electrical installations	Mechanical – Bending, collapse, compression, impact	EN 50086-1,2
	Electrical – Insulation strength and resistance, bonding,	EN 50086-1,2
	Thermal – Flame propagation, resistance to heat	EN 50086-1,2
Low-voltage switchgear and controlgear assemblies	Temperature rise limits	EN 60439-1
	Dielectric test	EN 60439-1
	Insulation properties	EN 60439-1
Household equipment and appliances (LVD)	Screening test (insulation, earth bond, leakage current)	EN 60335-1,2

Note: Full conformity testing according to LVD directive 73/23/EEC and electromagnetic compatibility directive 89/336/EEC, available upon request.

NOTES: Stable samples are disposed of after 6 months unless otherwise instructed



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Testing and Calibration
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