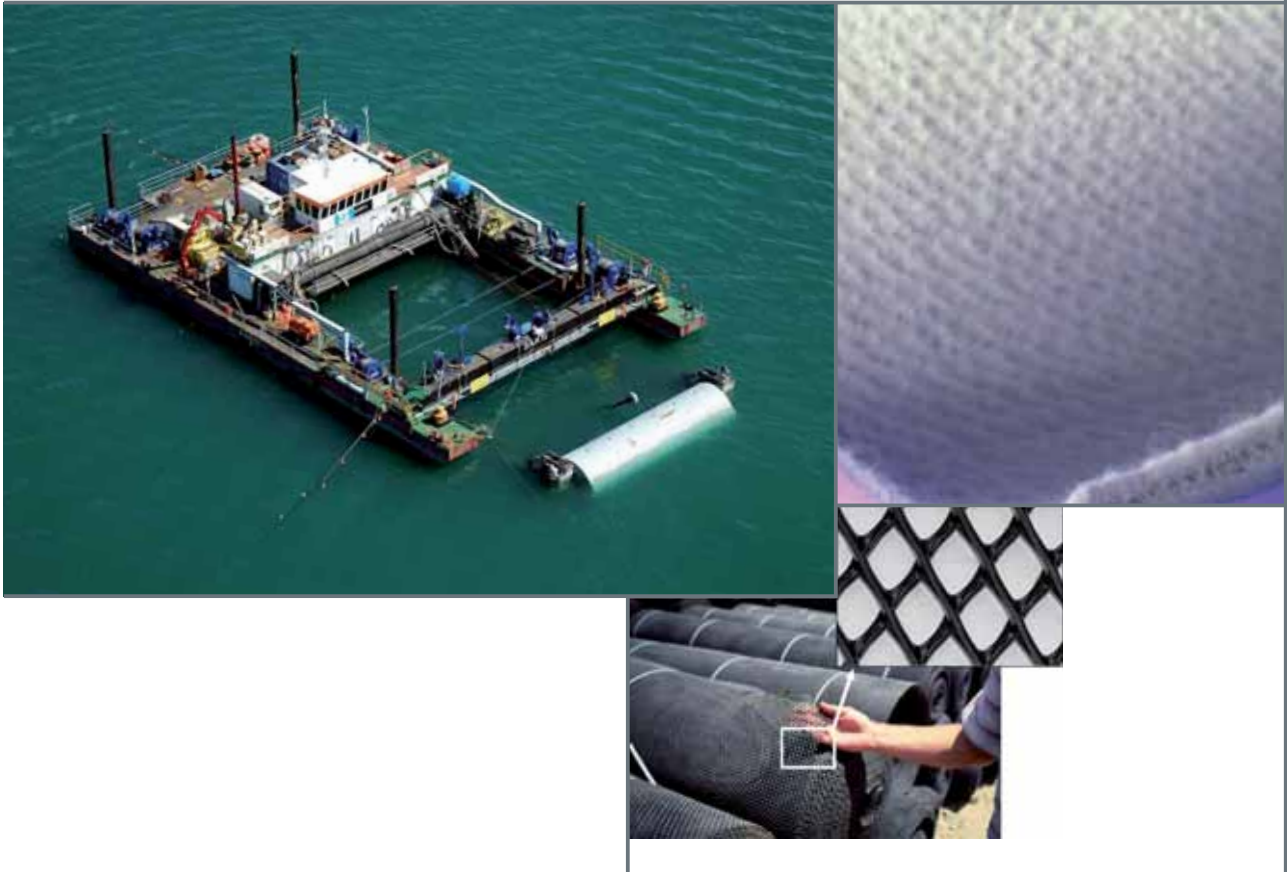


Geosynthetics

Use them with **confidence**.

Providing excellent services based on more than thirty years of international experience, CESI is leading the European Committee for Standardization on Geosynthetics, and provides highly specialised Lab tests and professional consulting for any Geosynthetic applications.



CESI is a key player in consulting services related to Dam Safety, Structural Engineering, Environmental Management of Industrial Plants, Natural Risks Mitigation and Environmental Impact Assessment. CESI's services cover both new plants construction and existing plants management/revamping: from environmental impact studies and permitting to emergency and risk mitigation plans and remediation design.

Monitoring campaigns are carried out to assess air and water quality, electromagnetic field and noise pollution. Modelling techniques are applied to identify polluting sources and to evaluate the effects of different polluting scenarios.

CESI can perform seismic and static monitoring of civil structures (e.g. dams) and protection of monumental heritage, numerical analysis to verify the behaviour of the structure with operating loads and loads associated to hypothetical scenarios of interest (e.g. earthquake).

CESI

Trust the Power of Experience

Testing • Consulting • Engineering • Environment

CESI's expertise

CESI provides consulting services on the geosynthetics usage as a main component (e.g. barrier, filter, drainage, protection, etc.) in the design of specific structures (as dams, canals, tunnels, landfills and contaminated sites).

CESI's engineering team is able to provide design suggestions for new or rehabilitation projects, and can provide another technical viewpoint for the proposed project through an innovative usage of geosynthetics as a solution, thanks to the multidisciplinary specialized approach of geosynthetic materials testing, with a specific focus for civil engineering and for geosynthetic manufacturers. CESI provides a complete analytical service, including product improvement and long-term durability testing.

CESI has more than thirty years' of experience in geo-materials and it developed many innovative devices to study the behavior of geo-materials, performing geosynthetics consulting services for more than 100 Clients in the last six years. Moreover it is been leading national and international standardization committees in this field since two decades.

CESI has the capabilities to conduct tests for ISO, EN, UNI, DIN, BS & ASTM standards (in some cases using accredited procedures). At CESI's Geosynthetics and Environmental Geotechnics Labs, it is possible to perform the following tests:

- chemical and physical tests for the characterization of geo-materials ("fingerprinting");
- mechanical tests for the determination of tensile, compressive, puncture, tear, burst and impact strength parameters, and for the evaluation of joints / seams characteristics;
- hydraulic tests for the determination of permeability normal to the plane, pore size, in-plane permeability, water absorption and watertightness parameters;
- durability tests for the evaluation of materials behavior in presence of aggressive liquids, atmospheric agents and extreme temperatures, and for the determination of tensile creep and compressive creep parameters, as well as stress-cracking parameters;
- tests on materials interaction with soils, for the evaluation of materials behavior at the interface with different soils and for the evaluation of the mechanical damage of geosynthetics during installation of granular materials.

CESI's Business Areas:

- **Testing, Inspection** and **Certification** services for HV, MV and LV electrical components;
- **Engineering** and **Consulting** services for power systems and markets, transmission and distribution grids, generation plants, renewable and hydro plants;
- **Environmental Consulting** and **Structural Engineering** services for Energy, T&D, Industry and Transport sectors;
- Production of **Solar Cells** for Space and Terrestrial (CPV) applications.

For further information please visit www.cesi.it, e-mail at mktismes@cesi.it or telephone at **+39 02 21255887**.

CESI SpA

Via Rubattino, 54
I-20134 Milan – Italy

Piacenza Offices

Via Nino Bixio, 39
I-29121 Piacenza – Italy

Seriata Offices

Via Pastrengo, 9
I-24068 Seriate (BG) – Italy

