

GSI W-31 Webinar Entitled: “Testing of Geosynthetics”

Webinar Overview

There are over 250 different geosynthetic specific tests methods covered by consensus ASTM International standard methods and ISO norms. These methods are key to supporting tens of thousands of environmental, hydraulic, geotechnical and transportation projects throughout the world. Testing is done for the purpose of conformance to a specification, establishing statistical process control (SPC), and performance testing to verify a design, research and development.

This webinar contains laboratory testing demonstrations of accredited physical, mechanical, hydraulic and endurance testing as it relates to geosynthetics. We will concentrate on the principles and guidance set forth by ISO 17025:2017 “General requirements for the competence of testing and calibration laboratories” for good geosynthetic testing. A system for providing accurate and reliable results, as well as the risks associated with the results, will be discussed during this webinar.

Learning Objectives

- Understand the importance of laboratory testing
- Understand laboratory procedures used while testing geosynthetics
- Become educated on ISO 17025 quality systems
- Identify additional resources for lab managers and technicians.

Webinar Benefits

1. Experience good geosynthetics testing established under controlled conditions
2. Learn comprehensive quality control systems
3. Ensure reputable results which can be compared to other results to establish reproducibility.
4. Understanding uncertainty (i.e. risk) associated with each test.

Intended Audiences

- Geosynthetic testing laboratory personnel
- Engineers and Designers
- Federal, state and regional environmental engineers
- Manufacturers of geosynthetic materials
- Contractors and installers of geosynthetics

Specific Topics Covered

1. Background
2. Standard safety organizations
3. ISO 17025
4. Specimen preparation
5. Physical Testing
6. Mechanical Testing
7. Chemical fingerprinting/durability
8. Soil Interaction
9. Summary and Conclusion

Webinar Instructor

Dr. George R. Koerner is the current director of the Geosynthetic Institute, a position that he has held since 2014. George's interest in geosynthetics spans his entire professional life from undergraduate work in the 1980's to the present. He holds his PH.D. in Civil, Architectural and Environmental Engineering from Drexel University in Philadelphia. George's master thesis was on direct shear testing of geosynthetic interfaces and his doctoral dissertation was on landfill leachate clogging of soil and geosynthetic filters. Both are regularly cited to this day.

Dr. George Koerner is a Professional Engineer in both Pennsylvania and New Jersey, and is an ASQC Quality Auditor. During his 30-years of geosynthetic activities, Dr. Koerner's output has been tremendous and he has to his credit the following publications:

- Books Edited or Co-Edited – 15
- Journal Papers – 18
- Symposium and Conference Publications – 40
- Book Chapters and Published Reports – 4
- Miscellaneous Articles – 30

The Geosynthetic Institute is a nonprofit research and development organization dedicated to the proper use of geosynthetics in its myriad applications. As director of the Geosynthetic Institute, Dr. George Koerner is also in charge of the laboratory accreditation and inspection certification programs.