

**GSI W-33 Webinar Entitled:
“UV Resistance of Geosynthetics”**

1.5 PDHs upon completion of a 10 question multiple choice quiz.

Cancellation Policy: prerecorded webinar is available to view for your convenience.

The formulations and additives used when manufacturing Geosynthetics plays an integral part in determining which Geosynthetics have the best UV resistance. There are many different methods used to manufacture Geosynthetics and each method affects the products degradation and how resistant it is to the effects of weathering. This presentation focuses on half-life prediction estimates from both the field and laboratory data and the differences between them. Examples and estimates will be given for geotextiles, geomembranes, erosion control materials and geogrids. The importance of these estimates and the roles that they play will also be discussed. Applications that require excellent UV Resistant Geosynthetics will be examined and case histories will be analyzed. Finally, factors to consider that will either decrease or increase values will be mentioned.

Upon successful completion of this course the learner will be able to:

1. Understand the importance of UV resistance of geosynthetics
2. Describe the different methods used to manufacture geosynthetics.
3. Understand formulations that resist degradation.
4. Recognize the differences between laboratory exposure and field exposure and know how to convert laboratory ½ life to field service life estimates.
5. Troubleshoot case histories.
6. Differentiate between service life, half-life and end of life.

Webinar Benefits

1. Understanding methodology of predicting half-life estimates using both laboratory and field data.
2. Learn how changing the formulations with antioxidant packages, additives and carbon black impact the UV resistance of geosynthetics
3. Learn the importance of UV resistant geosynthetics through several case histories discussed during the webinar.

Intended Audiences

- Consulting engineers and designers
- Geosynthetic testing laboratory personnel
- Federal, state and regional environmental engineers
- Private and municipal land developers, architectural and landscape designers
- Manufacturers of geosynthetic materials
- Contractors and installers of geosynthetics

Specific Topics Covered

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| 1. Background and Methodology | 10 min. |
| 2. Manufacturing UV Resistant Geosynthetics | 15 min. |
| 3. Laboratory vs Field Exposure | 20 min. |
| 4. Service Life Predictions | 20 min. |
| 5. Applications requiring excellent UV Resistant Geosynthetics | 15 min. |
| 6. Summary and Recommendations | 10 min. |

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 – 17
- Journal Papers – 24
- Articles, Symposium and Conference Publications – 195
- Book Chapters and Published Reports – 4

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.