



Safety First

The FGI believes it is important to always put safety first. We'll be sharing tips often to ensure safety both off and on the job site.

ELIMINATE COMPLACENCY WITH THE 20-20-20 RULE...

EVERY 20 MINUTES...

While you are on a job site it can help you achieve your safety objectives when you set up regular time intervals to review/scan your surroundings. Set a discrete alarm/timer on your watch or phone for every 20 minutes if that helps you remember.

TAKE 20 SECONDS...

Take 20 seconds to just be aware of your surroundings with safety in mind. This doesn't have to be exactly 20 seconds, and you don't want to get too elaborate with alarms on your phone or watch, but approximately 20 seconds is all you need for this rule.

LOOK 20 FEET AROUND YOU...

Scan about 20 feet around you to see if there are any safety hazards that need to be addressed. If you see something that needs attention make sure it is addressed by yourself, your supervisor, or another crew member.



[Download Tailgate Safety Flyers Here](#)



FGI Sells Out CCR Short Course

The FGI, in collaboration with the University of North Carolina at Charlotte (UNCC), offered a short course titled, "Coal Combustion Residuals (CCRs): Current Regulations & Solutions" on November 6, 2019 in Charlotte, NC to a sold out venue. The dynamic short course offered presentations from Duke Energy, Consumers Energy, American Electric Power, The Ohio State University, UNCC, Wood, TRI Environmental, University of Illinois, and S&ME, Inc. Attendees gained a broad knowledge of current and emerging CCR regulations, local experience managing CCRs, and the advantages of using geosynthetics to manage and dispose of CCRs, while earning seven (7.0) PDHs.

[FGI Events Calendar](#)

**FGI Webinar: Factory Fabrication,
Installation & Testing of Geomembranes**



This webinar will discuss the types of geomembranes that can be factory fabricated and transported to the field for installation.

Factory fabrication can result in shorter construction time (and costs), higher seam quality, and a better completed liner system. Most fabricated geomembranes are less susceptible to wrinkling due to better dimensional stability, bending modulus, and flexibility which leads to better intimate contact with the subgrade and less risk of damage or wrinkle entrapment during soil covering. The webinar will focus on factory and field quality assurance and control testing, e.g., seam testing and as well as seam shear and peel strength testing, and developing panel sizes. The use of leak location surveys prior to and/or after soil covering also will be discussed.


Please note the late start time, as this webinar will be simultaneously broadcast in Australia in collaboration with the Australian Chapter of the International Geosynthetics Society.

Presenter

Timothy D. Stark, Ph.D., P.E.

University of Illinois at Urbana-Champaign

[Register for Webinar](#)



Material Specification for New PVC Geomembranes^{1,2,3,4,5}
(Specification Notes are shown in Appendix A)

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Effective Date: September 1, 2019

Controlled Parameter ¹	ASTM	PVC 10	PVC 18	PVC 19	PVC 16	PVC 14
Sample Thickness ² (mm)	12.5 (1/2 in.)	12.5 (1/2 in.)	12.5 (1/2 in.)	12.5 (1/2 in.)	12.5 (1/2 in.)	12.5 (1/2 in.)
Tensile Properties ³	D 638	24.8 kN/m ² 5.5 kN/m	48.8 kN/m ² 11.0 kN/m	71.8 kN/m ² 16.0 kN/m	87.8 kN/m ² 19.5 kN/m	127.8 kN/m ² 28.8 kN/m
Tensile Force at Break						
Elongation at Break						
Tensile Force at 100% Elongation ⁴	13.8 kN/m ² 3.1 kN/m	27.6 kN/m ² 6.2 kN/m	40.7 kN/m ² 9.2 kN/m	47.9 kN/m ² 10.8 kN/m	68.9 kN/m ² 15.6 kN/m	98.8 kN/m ² 22.5 kN/m
Change in Modulus at 100% Elongation						
Change in Modulus at 200% Elongation						
Tear Strength ⁵	D 563	2.8 kN/12.5 mm 11.4	5.6 kN/12.5 mm 22.8	8.4 kN/12.5 mm 34.2	10.0 kN/12.5 mm 40.8	14.0 kN/12.5 mm 56.4
Dimensional Stability ⁶	D 583	1%	1%	1%	1%	1%
Low Temperature Impact ⁷	D 256	-10°C	-10°C	-10°C	-10°C	-10°C
Change in Modulus of Elasticity ⁸	ASTM E 1130	Maximum Circumference Difference along roll width = 20 mm (3/16 in.) Minimum Board Offset = 17 mm (5/16 in.)				

FGI Updates PVC Geomembrane Specification

The Fabricated Geomembrane Institute (FGI) updated its Material Specification for New PVC Geomembranes, previously referred to as PGI 1104 and FGI 1117. The new specification, FGI 9119, addresses camber or layflat, film gloss, shore hardness, and color deviation within a manufactured lot. The new specification introduces the FGI Circumference Test which measures the roll circumference at the ends and several points along the roll to maintain roll straightness or decreased camber. FGI 9119 also includes requirements for film gloss to reduce blocking or sticking of the geomembrane upon unrolling. A Shore Hardness requirement was also added to improve handling and welding of the geomembrane. FGI 9119 PVC Geomembrane Specification is available in both English and Spanish.

[Download New PVC Specification](#)



Women in Geosynthetics

Promoting the advancement of women in the geosynthetics industry through education, networking, and mentoring opportunities. Next meeting is Thursday, December 12, 2019 at 2 p.m. CST

[Women in Geo Website](#)

FGI Creates New Installer Membership

The Fabricated Geomembrane Institute has created a new membership category for companies who just install geomembranes. For only \$1,000 per year, Installer Membership provides project-specific information to facilitate design, specification, testing, research, and installation of fabricated geomembranes, participation in FGI-sponsored webinars, short courses, and workshops, hands-on development of industry material, fabrication, and installation standards, as well as company name, logo, and website link on the FGI's online membership directory.

[Join FGI - Learn More](#)

JOIN TODAY!

**NEW
INSTALLER
MEMBERSHIP**
Only \$1,000 to Join!



MEMBER BENEFITS

Receive project-specific information to facilitate design, specification, testing, and installation of fabricated geomembranes.

Receive project referrals from FGI inquiries.

Provide mechanism for development of industry material, fabrication, and installation standards.

Increase use of fabricated geomembranes.

Participate in FGI-sponsored webinars, short courses, and workshops.

Receive assistance in publishing case histories, new technologies, research results, and other information.

Company and logo listing on FGI website.

Contact us at fabricatedgeomembrane@gmail.com
or visit <https://www.fabricatedgeomembrane.com/join/annual-dues>

FGI's Website - #1 Resource for Fabricated Geomembranes

- Installation Details & Drawings
- Pond Leakage Calculator
- Online PDH Credit Program
- Webinar Library
- Member Directory
- ASTM Factory & Field Testing Videos
- Latest Specifications & Guidelines
- Material and Equipment Guides
- Technical Papers & Journal Articles
- Industry News and Events
- Photo and Video Gallery



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[Visit FGI Website](#)

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