

# CERTIFICATE NO. 2014-01

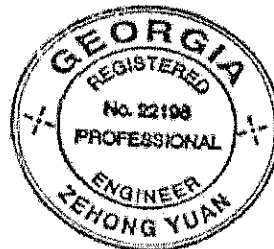
**Client:** Glenn Harp and Sons, Inc.  
**Sample Received:** 1/5/2014  
**Testing Date:** 1/15 to 1/17/2014  
**Issue Date:** 3/1/2014  
**Client's Reference:** 8' x 8' Twistrap

**Sample Description:** An 8 ft x 8 ft PVC coated fabric reinforced by 1.5-in wide straps at specific locations as shown in Figure 1. At each corner of Twistrap, a lifting loop was stitched to base fabric.

**Test Description:** Creep-Limited Lifting Strength (ASTM D 5262 Modified)

## Summary of Test Results:

The creep-limited lifting strength test was conducted to determine the creep-limited lifting strength of 8 ft x 8 ft Twistrap manufactured by Glenn Harp and Sons, Inc. The 8 ft x 8 ft Twistrap was subjected to a constant tensile load of 5087 lbs (total weight of soil, concrete blocks, and steel plates) for 48 hours. No failure (crack or rupture) of reinforcing straps, lifting loops, base PVC-coated fabric, and sewing stitches occurred at the completion of the 48 hours of loading. Based on the test results, it is concluded that the 48-hour creep-limited strength of the 8 ft x 8 ft Twistrap is 5,087 lbs or higher.



A handwritten signature in black ink, appearing to read "Zehong Yuan".

Zehong Yuan, Ph.D. P.E.  
Laboratory Manager



**SGI TESTING SERVICES, LLC**

DATE REPORTED:	3/1/2014
FIGURE NO.	1
PROJECT NO.	SGI12020
DOCUMENT NO.	
FILE NO.	

# CERTIFICATE NO. 2014-02

Client: Glenn Harp and Sons, Inc.  
Sample Received: 2/5/2014  
Testing Date: 2/7 to 2/10/2014  
Issue Date: 3/1/2014  
Client's Reference: 6' x 6' Twistarp

Sample Description: A 6 ft x 6 ft PVC coated fabric reinforced by 1.5-in wide straps at specific locations as shown. At each corner of Twistarp, a lifting loop was stitched to base fabric.

Test Description: Creep-Limited Lifting Strength (ASTM D 5262 Modified)

## Summary of Test Results:

The lifting capacity test was conducted to determine the creep-limited lifting strength of 6 ft x 6 ft Twistarp manufactured by Glenn Harp and Sons, Inc. The 6 ft x 6 ft Twistarp was subjected to a constant tensile load of 4,217 lbs (total weight of soil, concrete blocks, steel plates, and steel chains) for 60 hours. No failure (crack or rupture) of reinforcing straps, lifting loops, base PVC-coated fabric, and sewing stitches occurred at the completion of the 60 hours of loading. Based on the test results, it is concluded that the 60-hour creep-limited strength of the 6 ft x 6 ft Twistarp is 4,217 lbs or higher.



A handwritten signature in black ink, appearing to read "Zehong Yuan".

Zehong Yuan, Ph.D. P.E.  
Laboratory Manager



**SGI TESTING SERVICES, LLC**

DATE REPORTED:	3/1/2014
FIGURE NO.	2
PROJECT NO.	SGI12020
DOCUMENT NO.	
FILE NO.	