January 13, 2016

DOC Inv. Nos. A-570-036 and C-570-037
USITC Inv. Nos. 701-TA-___, 731-TA-___
Total Pages: 2751
Investigation
Petitioner’s Business Proprietary Information
deleted from Attached Petitions at Volume I, pages 2,
5-7, 9, 11, 13, 15, 19, 21-22, 24-28, 31, 33-40, 44-45,
List of Exhibits, and Exhibits I-4, I-39-I-43, and I-
47-I-51; and Volume II, pages 7-13, List of Exhibits,
and Exhibits II-4, II-8, II-9, II-13, II-17, II-18, and II-
19.

PUBLIC VERSION

The Honorable Penny S. Pritzker
Secretary of Commerce
Attn: Import Administration
APO/Dockets Unit, Room 18022
U.S. Department of Commerce
14th Street and Constitution Avenue, N.W.
Washington, D.C. 20230

The Honorable Lisa R. Barton
Secretary
U.S. International Trade Commission
500 E Street, S.W., Room 112
Washington, D.C. 20436

Re: Petitions for the Imposition of Antidumping and Countervailing Duties:
Certain Biaxial Integral Geogrid Products from the People’s Republic of China

Dear Secretary Pritzker and Secretary Barton:

On behalf of Tensar Corporation (“Petitioner”), we hereby submit to the U.S. Department
of Commerce (the “Department”) petitions for the imposition of antidumping duties and
countervailing duties on certain biaxial integral geogrid products from the People’s Republic of
China (the “Petitions”) pursuant to sections 701, 702(b), 731, and 732(b) of the Tariff Act of
In conclusion, the best information reasonably available to Tensar shows either that Tensar is the only U.S. producer of the subject product or that Tensar and Tenax are the only two such producers, with Tensar’s output [ ] exceeding any production by Tenax. Under either of these circumstances, Tensar plainly represents enough domestic production to have standing to bring these cases.68

D. Previous Requests for Import Relief for the Merchandise (19 C.F.R. § 351.202(b)(4))

Tensar has not filed for relief from imports of the subject merchandise under Section 201 of the Trade Act of 1974, Section 337 of the Act, Section 301 of the Trade Act of 1974, or Section 232 of the Trade Expansion Act of 1962.

E. Scope of the Investigations and a Detailed Description of the Subject Merchandise (19 C.F.R. § 351.202(b)(5))

1. Scope of Investigations

The physical characteristics of the covered products, which define the scope, are as follows:

67 See Declaration of Bryan Gee at ¶ 13, attached hereto as Exhibit I-4.

68 It should be noted that Tensar has an affiliate in Wuhan, China, Tensar Geosynthetics (China) Limited. See http://www.tensarcorp.com/Contact-Us/Office-Locations/Tensar-Geosynthetics-Ltd, attached hereto as Exhibit I-5. However, with regard to the definition of “related party” in 19 U.S.C. § 1677(4)(B), Tensar does not import the subject merchandise from its affiliate in China or any other Chinese producers or exporters. Further, Tensar Geosynthetics (China) Limited does not export the subject merchandise to, or import the subject merchandise into, the United States. See Declaration of Bryan Gee at ¶ 12, attached hereto as Exhibit I-4.
A polymer grid or mesh material (whether or not finished, slit, cut-to-length, attached to woven or non-woven fabric or sheet material, or packaged) in which four-sided openings in the form of squares, rectangles, rhomboids, diamonds, or other four-sided figures predominate. The products covered have strands (which generally have at least some degree of molecular orientation) that constitute the sides of the openings and integral junctions where the strands intersect. The products covered have a tensile strength of greater than 5 kilonewtons per meter ("kN/m") as measured by American Society for Testing and Materials ("ASTM") Standard D6637/D6637M in any direction and average overall flexural stiffness of more than 100,000 milligram-centimeter as measured under the ASTM D7748/D7748M Standard Test Method for Flexural Rigidity of Geogrids, Geotextiles and Related Products.

Subject merchandise includes material matching the above description that has been finished, packaged, or otherwise further processed in a third country, including by trimming, slitting, coating, cutting, attaching to woven or non-woven fabric or sheet material, or any other finishing, packaging, or other further processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the country of manufacture of the biaxial integral geogrid.

All products that meet the written physical description are within the scope of these investigations unless specifically excluded. The following products are outside of and/or specifically excluded from the scope of these investigations:

(i) grid or mesh materials comprised of strands (including strands consisting of bundled, coated, or sheathed fibers or filaments) that are:

(a) woven, knitted, or stitched together;

(b) mechanically joined (such as through tying, stapling, or use of rings);

(c) joined together by calendaring, heating, lasers, or welding in such a way as to lack a homogenous or integral junction, such as where strands running in different directions remain mostly in two planes; or

(d) bonded together with adhesives or other materials; and

(ii) grid or mesh materials wholly comprised of materials other than polypropylene or high density polyethylene.

The products subject to the scope are currently classified in the Harmonized Tariff Schedule of the United States ("HTSUS") under the following subheading: 3926.90.99.95. Subject merchandise may also enter under subheadings 3920.20.00.50 and 3925.90.00.00. The HTSUS subheadings set forth above are provided for convenience and U.S. Customs purposes only. The written description of the scope is dispositive.
2. Technical Characteristics and Uses

The biaxial integral geogrid at issue here consists of a grid made from an extruded polymer, usually polypropylene or high density polyethylene, in which the junctions connecting the strands of the grid are homogenous or "integrally formed." In other words, the junctions do not result from taking strands or strips of polymer and knitting, weaving, melt-bonding, or welding them together. Instead, the geogrid is a monolithic structure, meaning the junctions are homogenous with and integral to the formation of the grid itself. For example, as discussed in more detail below, Tensar makes biaxial integral geogrid by punching small quadrangular holes into a sheet of extruded polypropylene, and then stretching (or "drawing") the sheet both longitudinally and transversely in order to introduce "molecular orientation" into the product which gives it exceptional strength and to create grid apertures of the required size.

Integral oriented geogrids – like the biaxial integral geogrid at issue here – have particular advantages with respect to junction strength, tensile strength, junction efficiency (which is the ratio of the measured junction strength to the measured ultimate tensile strength of the geogrid), aperture stability (which measures the geogrid’s resistance to twisting around the junction), stiffness (which aids in resistance to deformation) and other features – compared to grids made from strands or strips that have been knitted, woven, melt-bonded or welded together.69

These characteristics of biaxial integral geogrid products are particularly useful in earthwork construction, such as in roadways. Conventional methods of road construction have been to use stone and, sometimes, a geotextile for drainage, underneath the paved or unpaved

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69 Declaration of Bryan Gee at ¶ 5, attached hereto as Exhibit I-4.
surface.\(^70\) However, the U.S. Army Corps of Engineers has indicated that this type of geotextile should not be regarded as providing any structural benefit to a roadway section.\(^71\) Accordingly, there is a market for geosynthetics that allow a contractor to improve not just the drainage, but also the structure and performance of a road, while using less stone.\(^72\) Such geosynthetics are also particularly helpful in situations where weak or wet foundation soils make building a roadway difficult, even in situations where large volumes of stone have been used.\(^73\)

Tests have shown that downward and lateral movement of stone is detrimental to the performance of a road.\(^74\) This generally occurs from traffic loads on the surface. Thus, as Tensar has reported, "\{w\}hat is required is a product that will lock the stone into place, not allowing it to move downward or laterally.\(^75\) The geogrid’s main function in this context is stabilization, which involves the mechanical interlock and confinement of the stone used in road construction, (such stone is also commonly known as “aggregate”).\(^76\) The geogrid also spreads out the load coming from the traffic above which helps avoid rutting, similar to how a snowshoe functions to spread the weight of a person across a larger surface area. Because of the strong junctions in biaxial integral geogrid, the tensile strength of the oriented strands, the resistance to deformation,
and the stiffness of the material, it is better able to hold its shape when it is included as part of the foundation of a roadway, thus effectively holding the aggregate in place. This interlock prevents aggregate from moving into a soft subgrade through downward movement, while the confinement of aggregate within the geogrid apertures stabilizes the aggregate layer, preventing lateral movement and increasing the road's load bearing capacity.\textsuperscript{77} Thus, biaxial integral geogrid allows for the aggregate thickness to be reduced in a road section, saving cost and construction time while giving the same or better performance as a section constructed with substantially more aggregate.\textsuperscript{78}

Given these facts, the most common use of the subject product is in the construction of paved (usually asphalt) and unpaved roads.\textsuperscript{79} In addition, it is used in other construction projects— for example it can be used to reinforce foundations or working platforms that are built on top of unstable soils.\textsuperscript{80} In each of these cases, customers rely on the ability of the biaxial integral geogrid to maintain its structural integrity, strength and performance under load — thus giving additional stability and load-bearing capacity to the underlying foundation.

3. Production Methodology

Tensar makes the subject product at a facility in Morrow, Georgia (approximately 15 miles south of Atlanta).\textsuperscript{81} Tensar begins by blending polypropylene resin pellets with black
masterbatch. The masterbatch provides coloring as well as ultra-violet light protection to the blend. The blended material is then melted and extruded into sheets. The sheets then pass through a large punch press which makes small quadrangular holes throughout the sheet. The hole pattern dictates the final grid configuration – while ensuring that the junctions in the grid are a homogenous part of the finished product. As explained above, the junctions are integral to the creation of the grid – and are not the result of knitting, weaving or welding together individual strands or strips of polymer. This type of biaxial integral geogrid has advantages in junction strength, tensile strength, junction efficiency, resistance to deformation, stiffness and other characteristics compared to the other geogrid products.

In the Tensar process, after the small holes have been punched into the polypropylene sheet, it is then processed by a stretching machine. This machine is commonly referred to as an “orienter,” which heats the punched sheet to make it more pliable and then pulls it in two directions – lengthwise (the “machine direction”) and then sideways (the “transverse” or “cross-machine” direction). By stretching the material in two directions, the orienter expands the size of the small holes that were originally created by the press. Stretching also significantly

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82 Id. at ¶ 3.
83 Id.
84 Id.
85 Id. at ¶ 4.
86 Id.
87 Id.
88 Id. at ¶ 5.
89 Id.
90 Id.
lengthens and widens the finished material versus the pre-stretched sheet. Most importantly the stretching also works at the molecular level to "orient" or align the molecules in a chain-like pattern which imparts much greater strength to the geogrid, thus providing load-bearing capacity and other robust characteristics needed for demanding earthwork construction applications.

As the subject product leaves the orienter, it goes through a water bath to cool it off and then onto a winding machine and cutter which gathers it up, cuts it to length, spools it into rolls, and wraps it with identifying tape so that it is ready for shipment.

4. Tariff Classification

There is no single subheading in the HTSUS that is solely devoted to the biaxial integral geogrid at issue in this case. Tensar believes that they are properly classified under Chapter 39 of the HTSUS, which relates to "Plastics and Articles Thereof." The appropriate subheading is 3926.90.99.95, which is a basket category covering articles of plastics not elsewhere specified or indicated.

It should be noted, however, that in preparing these petitions, counsel for Tensar analyzed numerous bills of lading relating to U.S. imports of biaxial integral geogrid, which were obtained from [ ]. The results of this analysis are discussed in more detail in Sections I.L and II below. What is relevant here is that since the beginning of 2012, imports that, from their description, certainly appear to be imports of the subject product, have entered the U.S.

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91 Id.
92 Id.
93 Id. at ¶ 6.
94 The relevant pages from the HTSUS can be found at Exhibit I-38.
95 Id. HTSUS subheading 3926.90.99.95 replaced subheading 3926.90.99.80 effective Jan. 1, 2015. HTSUS subheading 3926.90.99.80 replaced subheading 3926.90.98.80 in 2007.
market under a number of different six-digit HTSUS codes other than 3926.90, including:

2008.11, 2309.10, 2516.90, 2827.39, 3901.20, 2931.19, 3920.20, 3925.90, 6117.10, 6911.10,
8708.30, and 9606.30.\(^{96}\)

F. The Names of the Subject Countries and the Name of Any Intermediate Country Through Which the Merchandise Is Transshipped (19 C.F.R. § 351.202(b)(6))

Biaxial integral geogrid covered by these Petitions is manufactured in and exported to the United States from China. As explained in more detail in Section I.L. below, the best information available to Tensar indicates that some of the Chinese shipments of biaxial integral geogrid entering this country are being transshipped through South Korea.

G. The Names and Address of Each Person Believed to Sell the Merchandise at Less than Normal Value and the Proportion of Total Exports to the United States (19 U.S.C. § 351.202(b)(7)(i)(A))

The names and addresses of the entities believed by Tensar to be producing and exporting biaxial integral geogrid subject to these Petitions are provided in Exhibit I-37. Information reasonably available to Tensar does not allow it to identify the proportion of total exports to the United States accounted for during the most recent 12-month period by the producers and exporters listed in this exhibit. Nevertheless, such information suggests that the companies listed in Exhibit I-37 account for the vast majority of subject exports.


This requirement does not apply to these Petitions, which do not involve imports from a market economy country.

\(^{96}\) The complete data set from \[\text{[ ]}\], which serves as the basis for the import data in these petitions, can be found at Exhibit I-39.
EXHIBIT II-19
### Calculation of Dumping Margins

<table>
<thead>
<tr>
<th>Observation Type</th>
<th>Product Type</th>
<th>Normal Value U.S. Price $/lb.</th>
<th>Dumping Margin $/lb.</th>
<th>Dumping Margin %</th>
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</thead>
<tbody>
<tr>
<td>US OBS 1 BX 1100</td>
<td>BX 1100</td>
<td>$247.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US OBS 2 BX 1200</td>
<td>BX 1200</td>
<td>$186.59</td>
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<td></td>
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<tr>
<td>US OBS 3 BX 4100</td>
<td>BX 4100</td>
<td>$173.38</td>
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</tr>
</tbody>
</table>

Average Dumping Margin: 202.42

1. See Feicheng's Cost of Production, attached hereto as Exhibit II-18, Attachment C, Figure 6.
EXHIBIT I-37
Chinese Producers and Exporters of Biaxial Integral Geogrid

1. **Anhui Huifeng New Material Co., Ltd.**
   XinTianDi International Center 20F, Suixi Road
   Hefei, Anhui
   People’s Republic of China

   Website: www.ahhuifeng.com.cn
   Telephone: 0551-65626466
   Fax: 0551-65628466
   Email: root@ahhuifeng.com.cn

2. **Changsha Lisan Non-Woven Fabrics Factory**
   Xiaduopu Industrial Zone, Ningxia
   Changsha, Hunan 410604
   People’s Republic of China

   Website: http://lisan3.312green.com/
   Telephone: 0731-7950293
   Fax: 0731 7950888
   Email: wxw@lisan.cn

3. **Changzhou Huali Textile Composites Ltd.**
   Changzhou City Wujin District, Hutang Donghua Village
   Changzhou, Jiangsu 213000
   People’s Republic of China

   Website: http://czyxhfz.cn.china.cn
   Telephone: 0519-86322988
   Fax: 0519-86709788

4. **Chengdu PIKE Geothynthetics Co., Ltd.**
   Chengdu Xindou Zone, Dragon Bridge Industrial Park
   Chengdu, Sichuan
   People’s Republic of China

   Website: www.cdpktg.com
   Telephone: 028-83079077
   Fax: 028-83068177
5. **Chengdu Tian Road Engineering Materials Co., Ltd.**  
Chengdu Jinshan Wanrui Center, Shajin Road No.1  
Section C, Room 1406  
Chengdu, Sichuan 610031  
People’s Republic of China  
Website: www.sctianlu.cn  
Telephone: 028-65301139  
Fax: 028-65301138  
Email: cdtianlu@163.com

6. **Chengdu Xinjiuan Geosynthetics Co., Ltd.**  
Chengdu, Sichuan 610000  
People’s Republic of China  
Website: http://www.cdxja.com/index.php  
Telephone: 400-683-6683  
Fax: 86 + 028 - 83988055  
Email: cdxja@163.com

7. **Chongqing Gaoshuo Technology Co., Ltd.**  
Chongqing Nanan Zone, Jiangnan Da Street No. 75  
Haohong Sheng Apartment A, 26-5  
Chongqing, Chongqing  
People’s Republic of China  
Website: www.cqgaoshuo.com  
Telephone: 023-62808586  
Fax: 023-62808576  
Email: cqgaoshuo@163.com

8. **Chongqing Jiudi Reinforced Soil Engineering Co., Ltd.**  
Nan’an District Haitangxi Road, No. 34 Pu Yu Building 6-4  
Chongqing, Chongqing 400060  
People’s Republic of China  
Website: www.cqjdty.cn  
Telephone: 023-62963047  
Fax: 023-62963047
9. **Chongqing Yonggu Geosynthetics Co., Ltd.**  
Chongqing, Chongqing  
People's Republic of China  

Websites:  
http://www.cqyongu.cn/index/columnsId=1.html  
http://bmlink60453.bmlink.com/company  
Telephone: 023-63600188/68278899  
Fax: 023-63600288/68279988  
Email: yongu@vip.163.com

10. **CNBM International Corporation**  
17th Floor, No. 4 Building, Zhuyu Business Center  
Shouti South Road, Haidian District  
Beijing 100048  
People’s Republic of China  

Telephone: (86-10) 68796888  
Fax: (86-10) 68796668  
Email: marketing@okorder.com, hr@okorder.com

11. **Dezhou Eastern Geotextile Material Co., Ltd.**  
Lingxian Economic Development Zone  
Dezhou, Shandong 253000  
People’s Republic of China  

Website: http://fuleidage.cn.china.cn/  
Telephone: 15552645803  
Fax: 0534-2385069

12. **Dezhou Orient Geosynthetics Co., Ltd.**  
Lingxian Economic Development Zone  
Dezhou, Shandong 253000  
People’s Republic of China  

Website: http://fuleidage.cn.china.cn/  
Telephone: 15552645803  
Fax: 0534-2385069
13. **Dezhou Yaohua Geosynthetics Ltd.**
Dezhou City Lingxian Economic Development Zone, Yingbin Street, South
Dezhou, Shandong 253500
People’s Republic of China

Website: http://dzhyhtzhj.1688.com/page/creditdetail.htm
Telephone: 86 0534 8823823
Fax: 86 0534 8823823

14. **Dezhou Zhengyu Geosynthetics Ltd.**
Lingxian Economic Development Zone, Fufung Street West Side
Lingxian, Shandong 253500
People’s Republic of China

Website: http://dzzhengyu.1688.com/page/creditdetail.htm
Telephone: 86 0534 8289926
Fax: 86 0534 2133799

15. **BOSTD Geosynthetics Qingdao Ltd.**
Qingdao Industrial Zone, Chengyang District
Qingdao, Shandong 266111
People’s Republic of China

Website: www.bostd.com
Telephone: 86 10 8284 2590
Fax: 86 10 8284 2578
Email: export@bostd.com

16. **Feicheng Lianyi Engineering Plastic Co., Ltd.**
Feicheng New & High-Tech Development Zone
Feicheng, Shandong
People’s Republic of China

Website: www.chinageogrid.com
Telephone: 0538-3539888
Fax: 0538-3539777
Email: lianyigeogrid1123@hotmail.com
17. **Hebei Anpingxian Lituo Metal Mesh Products Co., Ltd.**  
Hebei Province, Anping County, SiWang (Mesh) Industrial Park No. IV-21  
Anping, Hebei  
People’s Republic of China  
Website: www.hbtugonggeshan.com  
Telephone: 400-030-9559  
Fax: 0318-8065566  
Email: 402010160@163.com

18. **Hebei Baoyuan Engineering Plastic Co., Ltd.**  
Jingxian MiaoZhen Development Zone  
Hebei 53500  
People’s Republic of China  
Website: www.hbbaoy.fibreinfo.cn  
Telephone: 0318-4589696  
Fax: 0318-4589697  
Email: hbbaoy@163.com

19. **Hebei Topone Mesh Products Co., Ltd.**  
Anping County, Industrial District  
Anping, Hebei  
People’s Republic of China  
Website: http://www.toponemesh.com  
Telephone: 18730878186  
Email: lyj@toponemesh.com

20. **Hengshui Zhongtiejian Group Co.**  
Taocheng Zone, Northern Industrial Base, Xiansu Road No. 1  
Hengshui, Hebei  
People’s Republic of China  
Website: www.zhongtiejian.com  
Telephone: 0318-2210066 2210086  
Fax: 0318-2210088 2210009  
Email: zhongtiejian@126.com
21. **Hongxiang New Geo-Material Co., Ltd.**  
Economic Development Zone, Ling County  
Dezhou, Shandong 253500  
People’s Republic of China  

Website: http://geosynthetic.gmc.globalmarket.com/company.html

22. **Hongye Engineering Materials Co., Ltd.**  
Huayuan Road, Lingshan Avenue Interchange  
Taian, Shandong  
People’s Republic of China  

Website: http://www.hygccl.com  
Telephone: 0538-6110350  
Fax: 0538-8091698  
Email: hygccl@163.com

23. **Hubei Kaile Science and Technology Co., Ltd.**  
Gongan County, Kaile Industrial City  
Jingzhou, Hubei 430070  
People’s Republic of China  

Website: www.cnkaile.com  
Telephone: 027-87816168  
Fax: 027-87250746  
Email: kaile@cnkaile.com

24. **Hubei Nete Geosynthetics Ltd.**  
Economic and Technological Development Zone,  
Qingdao Road  
Yichang, Hubei 443003  
People’s Republic of China  

Website: www.nete.com.cn  
Telephone: 0717-6908800  
Fax: 0717-6920288
<table>
<thead>
<tr>
<th>No.</th>
<th>Company Name</th>
<th>Address</th>
<th>Website</th>
<th>Telephone</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Jiangsu Jiuding New Material Ltd.</td>
<td>No. 1 Zhongshan East Road Rugao, Jiangsu 226500</td>
<td>Website: <a href="http://www.cjdg.com/html-cn/index.php">http://www.cjdg.com/html-cn/index.php</a></td>
<td>Telephone: 0513-80695029</td>
<td>Fax: 0513-80695029</td>
<td>Email: <a href="mailto:cjdg@jiudinggroup.com">cjdg@jiudinggroup.com</a></td>
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<tr>
<td>27</td>
<td>Jiangsu Xindazhou Geotextile Material Co., Ltd.</td>
<td>Yixing City, New Town Yixing, Jiangsu</td>
<td>Website: <a href="http://www.jsxdztg.com">www.jsxdztg.com</a></td>
<td>Telephone: 0510-87288686</td>
<td>Fax: 0510-87287668</td>
<td>Email: <a href="mailto:web@jsxdztg.com">web@jsxdztg.com</a></td>
</tr>
<tr>
<td>28</td>
<td>Laiwu Jintai Engineering Material Co., Ltd.</td>
<td>Fengcheng Ind. Park, High-Tech. Zone Laiwu, Shandong 271100</td>
<td>Website: <a href="http://www.lwjintai.com">http://www.lwjintai.com</a></td>
<td>Telephone: 0634-5602299</td>
<td>Fax: 0634-5602399</td>
<td>Email: <a href="mailto:lwjintai@163.com">lwjintai@163.com</a></td>
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29. **Laiwu Zhongxing Earthwork Material Co., Ltd.**
Gaoxin District, Luhuayuan Industrial Park
Laiwu, Shandong
People’s Republic of China

Website: http://www.tugongbu.net/
Telephone: 86-634-5975778
Fax: 0634 5975778
Email: lwtgb@sina.com

30. **Lewu New Material Ltd.**
Dezhou City Lingxian Economic Development Zone,
NanHuan Road No. 12
Dezhou, Shandong 253500
People’s Republic of China

Website: http://zhangn1688.1688.com/page/creditdetail.htm
Telephone: 18266160191
Fax: 86 0534 8823823

31. **Lingxian Hualong Chemical Fiber Co., Ltd.**
Lingxian Economic Development Zone
Dezhou, Shandong 253500
People’s Republic of China

Website: http://www.tgfscl.cn/
Telephone: 13256267080
Fax: 0534-2261205
Email: dffsge@163.com

32. **Nanchang Teamgo New Material Co., Ltd.**
Nanchang, Jiangxi
People’s Republic of China

Website: http://tiangaoxincai.d17.cc/
Telephone: 0791—86690252
33. **Nanjing Jinlu Geosynthetics Ltd.**  
Nanjing Zhujiang Road No. 683, Room 505  
Nanjing, Jiangsu  
People’s Republic of China  

Website: http://corp.1688.com/page/index.htm?memberId=lana55&fromSite=company_site&tab=companyWeb_detail  
Telephone: 86 025 84817800-8007  
Fax: 86 025 84817800-8010

34. **Nanjing Kunchi Composite Material Ltd.**  
Nanjing Jiangning Zone TongJing Town, TongMei Road No. 30-2  
Nanjing, Jiangsu 211000  
People’s Republic of China  

Website: http://www.njkccl.com/  
Telephone: 025-57440477  
Fax: 025-57440700

35. **Nantong Huaxing Geotextile Material Co., Ltd.**  
Nantong City, Development Zone, RuiXing Road No. 11  
Nantong, Jiangsu  
People’s Republic of China  

Website: www.nttggs.cn  
Telephone: 13585225110  
Email: sales1@nttggs.cn

36. **Nanyang Jieda Geosynthetics Co., Ltd.**  
Nanyang City, Nanzhao County, West River Bridge  
Nanyang, Henan 474676  
People’s Republic of China  

Website: http://nyjdtg.cn.gtobal.com  
Telephone: 86-0377-66665309  
Fax: 86-0377-66687468
37. Qingdao Hongda Plastics Corp.
Qingdao, Chengyang Area KongGang Industrial Park
JinGangShan Road No. 2
Qingdao, Shandong 266108
People’s Republic of China

Website: www.hongdaplastic.com
Telephone: 0532-87718808
Fax: 0532-87718833
Emails: zongbang@hongdaplastic.com; zongban@hongdaplastic.cn

38. Qingdao Sunrise Dageng Import and Export Co., Ltd.
2402 Unit 2, 1st Bldg., Yulong Mansion, No. 19 Miaoling Road
Qingdao, Shandong 266061
People’s Republic of China

Website: http://topgeogrid.en.gongchang.com
Telephone: 86-0532-58807579-802
Fax: 86-0532-58807578

(also dba Shandong Dageng Fiberglass Co., Ltd.)
Hi-Tech Development Zone
Feicheng City, Shandong Province
Taian City, Shandong Province
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Website: http://en.dageng.com/index.asp
Telephone: 86-1305-3894799
Email: dageng@dageng.com

40. Shandong Dageng Group Co., Ltd.
2402, Unit2, 1st.Bldg, Yulong Mansion
Qingdao
People’s Republic of China

Telephone: 86-532-58807578
Fax: 86-532-80615033
Website: http://www.fiberglass-geogrid.com/
http://www.102541.tradebig.com
41. **Shandong Dexuda Geosynthetics Ltd.**  
LingXian Economic Development Zone, YingBin Street, North  
Lingxian, Shandong  
People's Republic of China  
Website: http://shop1407344793832.1688.com/page/creditdetail.htm  
Telephone: 86 0534 8269558

42. **Shandong Dezhou Xinxiang Geosynthetics Ltd.**  
Lingxian Economic Development Zone  
Dezhou, Shandong 253500  
People's Republic of China  
Website: http://www.sddongfanggufen.com/  
Telephone: 0534-2600360  
Fax: 0534-2600360  
Email: 2390300980@qq.com

43. **Shandong Feicheng Sanjie Engineer Material Ltd.**  
Feicheng, Shandong  
People's Republic of China  
Website: http://tajtb1.1688.com/page/creditdetail.htm  
Telephone: 1330538771

44. **Shandong Haoyang New Engineering Materials Co., Ltd.**  
168 Yingbin Road, New Technology Development Zone  
Yucheng, Shandong 251200  
People’s Republic of China  
Website: http://sdyangpeng.1688.com/  
Telephone: 86 0534 7281898

45. **Shandong Hongxiang Chemical Fibergroup Co., Ltd.**  
Lingxian Economic Development Zone  
Shandong  
People’s Republic of China  
Website: www.sdhxjt.net.cn  
Telephone: 86 0534 8261269  
Fax: 86 0534 2132020
46. **Shandong Jinxiang New Material Ltd.**  
Lingxian Economic Development Zone  
Lingxian, Shandong  
People’s Republic of China  

Website: http://phj998.1688.com/  
Telephone: 86 0534 8288778

47. **Shandong Lianjie Engineering Materials Co.**  
Taian City High-Tech Development Zone  
Taian, Shandong  
People’s Republic of China  

Website: www.sdlianjie.com  
Telephone: 0538-6718778  
Fax: 0538-6201000  
Email: sd_lianjie@163.com

48. **Shandong Liantuo New Material Co.**  
Feicheng New & High-Tech Development Zone  
Taian, Shandong 271600  
People’s Republic of China  

Website: www.liantuochina.com  
Telephone: 13615486873  
Email: feichenglianyi@163.com

49. **Shandong Runde Complex Material Co., Ltd.**  
Taian Daiyue Zone DaWenKou ShiGao Industrial Park  
Taian, Shandong 271000  
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Website: http://rundefuhecailiao.1688.com/  
Telephone: 86 0538 6995025  
Fax: 86 0538 6995025
50. **Shandong Shenghong New Material Ltd.**  
Lingxian Economic Development Zone, NanHuan Street  
Middle Section  
Lingxian, Shandong  
People’s Republic of China  
Website: http://shxcl888.1688.com/page/creditdetail.htm  
Telephone: 15166933888

51. **Shandong Tai’an Jiarui Construction Material Co., Ltd.**  
Shandong  
People’s Republic of China  
Website: www.jiaxiangsuji.com

52. **Shandong Taifeng Geosynthetics Co., Ltd.**  
Taian East Lake Road No. 18  
Taian, Shandong 271000  
People’s Republic of China  
Website: www.taifengchina.com  
Telephone: 0538-0884331

53. **Shandong Tongfa Glass Fiber Ltd.**  
Feicheng City High-Tech Development Zone, Yongan Road  
Feicheng, Shandong 271600  
People’s Republic of China  
Website: http://shop1352308519968.1688.com/page/creditdetail.htm  
Telephone: 18905385056  
Fax: 86 538 3251659

54. **Shandong Xinyu Geosynthetics Ltd.**  
Lingxian Lingzhou Road Middle Section No. 1702  
Lingxian, Shandong 253500  
People’s Republic of China  
Website: http://xytgcl888.1688.com/page/creditdetail.htm  
Telephone: 86 0534 8821566
55. **Shandong Yongrun Geotextile Co., Ltd.**  
Feicheng City High-Tech Development Zone, Yongan Road  
Feicheng, Shandong  
People’s Republic of China

Website: www.taianxinlida.com  
Telephone: 13581147768  
Fax: 0538-2167686  
Email: wqyongrun@163.com

56. **Shengdong Dageng Co., Ltd.**  
Shandong High-Tech Development Zone  
Taian, Shandong 271000  
People’s Republic of China

Website: www.sddgbx.com  
Telephone: 0538-8888822  
Fax: 0538-8220566  
Email: sddgbx@163.com

57. **Taian Desheng Marterial Ltd.**  
Taian City Daiyue Zone Qingchun Entrepreneurial Dev. Zone  
Taian, Shandong 271000  
People’s Republic of China

Website: http://deshengjiancai888.1688.com/page/creditdetail.htm  
Telephone: 086 0538 8362896  
Fax: 086 0538 8362568

58. **Tai'an Haohua Plastics Co., Ltd.**  
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Taian, Shandong  
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Website: http://www.haohua.cc/index.asp  
Telephone: 86 0538 6136990  
Fax: 86 0538 6132438  
Email: rope@haohua.cc
59. **Taian Hengbang Engineering Material Co., Ltd.**  
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Yuanshi Base Industrial Park  
Taian, Shandong  
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Website: www.tahemon.com  
Telephone: 0538-6136388  
Fax: 0538-6136389  
Email: tahemon@163.com

60. **Taian Huasu New Materials Engineering Co.**  
Daiyue High-Tech Development Zone  
Taian, Shandong 271000  
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Website: http://www.huaplast.com  
Telephone: 1338538557  
Fax: 0538-6627015  
Email: huaplast@huaplast.com

61. **Taian Jincheng Material Ltd.**  
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Website: http://tajcgcl.1688.com/page/creditdetail.htm  
Telephone: 86 0538 6301769  
Fax: 86 0538 6289598

62. **Taian Jingwei Plastics Co., Ltd.**  
Taian City, DaWenKou JingWei Industrial Park  
Taian, Shandong  
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Website: http://6jc765656.10huan.com/introduce/  
Telephone: 13854821031  
Fax: 0538-8818868  
Email: lqtajw@163.com
63. **Taian Modern Plastic Co., Ltd.**
Qingchun Entrepreneurship Development Zone
Chuangye Road No. 100
Taian, Shandong 27100
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Website: www.tamodern.com.cn
Telephone: 86 0538 8560690
Fax: 0538-8569959
Email: info@tamodern.com

64. **Taian Naite Geosynthetics Ltd.**
Taian YangHeDa Street
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Website: http://tatggs.1688.com/page/creditdetail.htm
Telephone: 86 0538 8888759
Fax: 86 0538 8888751

65. **Taian Puruite Geosynthetics Ltd.**
Taian Daiyue District, Qingchun Entrepreneurial Development Park
Taian, Shandong 271000
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Website: http://shop1383411180260.1688.com/page/creditdetail.htm
Telephone: 13655480326

66. **Taian Road Engineering Materials Co., Ltd.**
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Website: www.talude.com.cn
Telephone: 0538-6619066 6619088
Fax: 0538-6610886
Email: sdtalude@163.com
67. **Taian Ruiheng Engineering Material Co., Ltd.**  
Taian, Shandong 271000  
People’s Republic of China  
Website: http://tageshan.b2b168.com  
Telephone: 13793808979  
Fax: 5388411002  
Email: hsmy1g@163.com

68. **Taian Sentai Geosynthetics Ltd.**  
Taian City Taishan Zone, Gaoxin Area  
Taian, Shandong 271000  
People’s Republic of China  
Website: http://shop1346346879194.1688.com/page/creditdetail.htm  
Telephone: 13505480433  
Fax: 86 0538 13853866726

69. **Taian Wanli Engineering Material Co. Ltd.**  
Taian, Shandong 271000  
People’s Republic of China  
Website: www.tswanli.com  
Telephone: 0538-8262607  
Fax: 0538-8262607  
Email: ts_wanli@126.com

70. **Taian Yuanda Engineering Material Co., Ltd.**  
Shandong  
People’s Republic of China  
Website: www.taianyuanda.com

71. **Tenax**  
Tianjin, Tianjin 300381  
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Website: http://tjxqing01930.11467.com/  
Telephone: 022-24032180
72. **Yangzhou Dayu Geosynthetics Co., Ltd.**
Yizheng, Jiangsu 225009
People's Republic of China

Website: www.yzdayu.com.cn
Telephone: 0514-83458688
Fax: 0514-83458697
Email: caozheng5@sina.com

73. **Yixing Huarun Geotextile Co.**
Yixing City, Xinjian Town Industrial Development Park
Yixing, Jiangsu 214253
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Website: http://www.yxhrtg.com/index.asp
Telephone: 0510-80770701
Fax: 0510-80770703
Email: qrz@yxhrtg.com

74. **Yixing Huatai Earthwork Material Co., Ltd.**
Yixing City New Town
Yixing, Jiangsu 214253
People's Republic of China

Website: www.httgcl.com
Telephone: 0510-87287287
Fax: 0510-87287201
Email: 888@httgcl.com

75. **Yixing Hudong Civil Engineering Material Co., Ltd.**
Xinjian Town, Yixing City, Jiangsu Province
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Website: www.hdytgc.com
Telephone: 86-510-87285555
Fax: 0510-87280263
Email: 888@hdytgc.com
76. **Yixing Xintai Geosynthetics Co., Ltd.**  
Yixing, Jiangsu  
People’s Republic of China  
Website: http://wxxintai.cn.china.cn/  
Telephone: 51087597808  
Fax: 51087597801

77. **Yizheng Fudi Geosynthetics Ltd.**  
Yicheng City ZhenZhouZhen Industrial Concentration Zone,  
East Side  
Yizheng, Jiangsu  
People’s Republic of China  
Website: http://yzxd123.1688.com/page/creditdetail.htm  
Telephone: 86 0514 83298269  
Fax: 86 0514 83297881

78. **Zaoqiang Xinze Geosynthetics Ltd.**  
ZaoQiang County  
Zaoqiang, Shandong 53100  
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Fax: 86 0318 13932845257
EXHIBIT I-45
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Phone: (513) 794-1600
Email: N/A

Century Sourcing Group Inc.
381 5th Avenue
Floor 4
New York, New York 10016-3322
Phone: (718) 686-0900
Email: N/A

Contech Engineered Solutions
9025 Centre Pointe Drive
West Chester, Ohio 45069
Phone: (800) 336-1122
Email: info@conteches.com

DECA Global LLC
2029 Peabody Avenue
Memphis, Tennessee 38104
Phone: (901) 529-0059
Email: trade@decaglobal.com

Engineering Services & Products Co. (ESAPCO)
1440 Field of Dreams Way
Dyersville, Iowa 52040
Phone: (563) 875-2288
Email: hrdept@esapco.com
GSE Environmental, LLC
19103 Gundle Road
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Phone: (800) 435-2008
Email: seckhart@gseworld.com

Hanes Converting Co.
500 McLin Creek Road
Conover, North Carolina 28613
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Hanes Geo Components
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Winston-Salem, NC 27101
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Hill Country Site Supply LLC
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Email: info@ind-fab.com

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Email: info@landmsupplyco.com
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Email: seattle@layfieldgroup.com

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Memphis, Tennessee 38118
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Pacific GeoSource, Inc.
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Phone: (503) 261-3515
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Phone: (954) 803-9206
Email: bill@newrebar.com
Sek, Inc.
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380 Dahlonega St Suite 200
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