

**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

COREY TWIGG, *et al.*,

Plaintiffs,

v.

VARSITY BRANDS HOLDING CO.,
INC. *et al.*,

Defendants.

No. 4:23-CV-00067

(Chief Judge Brann)

MEMORANDUM OPINION

MARCH 7, 2025

I. BACKGROUND

On February 19, 2021, Plaintiffs Corey Twigg and Lori Twigg filed a five-count Complaint against Defendants Varsity Brands Holding Co., Inc. (“Varsity Brands”), BSN Sports, LLC (“BSN”), Sports Supply Group, Inc. (“SSG”), Spartan Athletics Company, and Garware Technical Fibers Limited (“Garware”) in the United States District Court for the Eastern District of Pennsylvania.¹ This case was then transferred to the United States District Court for the Middle District of Pennsylvania on January 13, 2023.² Upon completion of discovery, cross-motions for summary judgment were filed by the parties.³ Also pending before the Court are

¹ Doc. 1 (Compl.).

² Doc. 53 (Case Transfer).

³ Doc. 76 (Varsity Brands, BSN, SSG Motion for Summary Judgment); Doc. 81 (Plaintiffs’ Motion for Summary Judgment); and Doc. 82 (Garware Motion for Summary Judgment).

Defendants’ challenges to Plaintiffs’ proposed experts under Federal Rule of Evidence 702. These motions are now ripe for disposition; for the following reasons, Defendants’ motions under Rule 702 are granted in part and all parties’ motions for summary judgment are denied.

II. DISCUSSION

A. Motion for Summary Judgment Standard

Under Federal Rule of Civil Procedure 56, summary judgment is appropriate where “the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.”⁴ Material facts are those “that could alter the outcome” of the litigation, “and disputes are ‘genuine’ if evidence exists from which a rational person could conclude that the position of the person with the burden of proof on the disputed issue is correct.”⁵ A defendant “meets this standard when there is an absence of evidence that rationally supports the plaintiff’s case.”⁶ Conversely, to survive summary judgment, a plaintiff must “point to admissible evidence that would be sufficient to show all elements of a prima facie case under applicable substantive law.”⁷

⁴ FED. R. CIV. P. 56(a).

⁵ *EBC, Inc. v. Clark Bldg. Sys., Inc.*, 618 F.3d 253, 262 (3d Cir. 2010).

⁶ *Clark v. Mod. Grp. Ltd.*, 9 F.3d 321, 326 (3d Cir. 1993).

⁷ *Id.*

In assessing “whether there is evidence upon which a jury can properly proceed to find a verdict for the [nonmoving] party,”⁸ the Court “must view the facts and evidence presented on the motion in the light most favorable to the nonmoving party.”⁹ Moreover, “[i]f a party fails to properly support an assertion of fact or fails to properly address another party’s assertion of fact as required by Rule 56(c),” the Court may “consider the fact undisputed for purposes of the motion.”¹⁰ Finally, although “the court need consider only the cited materials, . . . it may consider other materials in the record.”¹¹

B. Federal Rule of Evidence 702

Federal Rule of Evidence 702 “has three major requirements: (1) the proffered witness must be an expert; (2) the expert must testify about matters requiring scientific, technical or specialized knowledge; and (3) the expert’s testimony must assist the trier of fact.”¹²

⁸ *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 252 (1986) (quoting *Schuykill & Dauphin Imp. Co. v. Munson*, 81 U.S. 442, 448 (1871)).

⁹ *Razak v. Uber Techs., Inc.*, 951 F.3d 137, 144 (3d Cir. 2020).

¹⁰ FED. R. CIV. P. 56(e)(2); *see also Weitzner v. Sanofi Pasteur Inc.*, 909 F.3d 604, 613-14 (3d Cir. 2018).

¹¹ FED. R. CIV. P. 56(c)(3).

¹² *Kannankeril v. Terminix Int’l*, 128 F.3d 802, 806 (3d Cir. 1997) (citing *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 741-42 (3d Cir. 1994)).

1. Qualifications

An expert must “possess specialized expertise.”¹³ The United States Court of Appeals for the Third Circuit has “interpreted this requirement liberally,’ holding that ‘a broad range of knowledge, skills, and training qualify an expert as such.’”¹⁴ But “more specific opinions” require “more specific knowledge,”¹⁵ although the Federal Rule of Evidence 104(a) standard the Court applies “does not require perfection.”¹⁶

2. Reliability

“[A]n expert’s testimony is admissible so long as the process or technique the expert used in formulating the opinion is reliable.”¹⁷ To be reliable, “the testimony [must] be based on the ‘methods and procedures of science,’ rather than on ‘subjective belief or unsupported speculation.’”¹⁸ The Third Circuit has identified “nonexclusive guidelines” to evaluate an expert’s methodology,¹⁹ but many of these

¹³ *Calhoun v. Yamaha Motor Corp., U.S.A.*, 350 F.3d 316, 321 (3d Cir. 2003) (quoting *Schneider v. Fried*, 320 F.3d 396, 405 (3d Cir. 2003)).

¹⁴ *Id.* (quoting *Paoli*, 35 F.3d at 741).

¹⁵ *Id.* at 322.

¹⁶ Fed. R. Evid. 702, Advisory Comm. Notes 2023 Amendment.

¹⁷ *Kannankeril*, at 806 (quoting *Paoli*, 35 F.3d at 742).

¹⁸ *Id.* (quoting *Paoli*, 35 F.3d at 744).

¹⁹ *Id.* at 806 n.6 (citing *Paoli*, 35 F.3d at 742 n.8). These guidelines include “(1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique’s operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualification of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.” *Id.*

factors “are not applicable” for experience based expertise.²⁰ Instead, the expert explains how their experience informs the conclusions reached.²¹

However, “[i]t will often occur that experts come to different conclusions based on contested sets of facts.”²² “[B]y deciding the disputed facts, the jury can decide which side’s experts to credit.”²³ Under this guidance, “once the court has found it more likely than not that the admissibility requirement has been met, any attack by the opponent will go only to the weight of the evidence.”²⁴

3. Fit

“The third element under Rule 702, namely, whether the expert testimony would assist the trier of fact, ‘goes primarily to relevance.’”²⁵ “The expert’s testimony must ‘fit’ under the facts of the case so that ‘it will aid the jury in resolving a factual dispute.’”²⁶

²⁰ *Jones v. Swept L.P.*, 643 F. Supp. 3d 547, 562 (W.D. Pa. 2022) (internal citations and quotations omitted).

²¹ *In re Lincoln Nat’l Coi Litig.*, 620 F. Supp. 3d 230, 244 (E.D. Pa. 2020) (quoting FED. R. EVID. 702, Advisory Comm. Notes 2000 Amendments).

²² FED. R. EVID. 702, Advisory Comm. Notes 2023 Amendments

²³ *Id.*

²⁴ *Id.*

²⁵ *Meadows v. Anchor Longwall and Rebuild, Inc.*, 306 F. App’x 781, 790 (3d Cir. 2009) (quoting *Lauria v. Amtrak*, 145 F.3d 593, 599 (3d Cir. 1998)).

²⁶ *Id.*

C. Factual Background

1. The Accident

Corey Twigg (“Twigg”), an assistant baseball coach for Montoursville Area High School (“the High School”),²⁷ was pitching indoor batting practice on March 10, 2019 when a ball unexpectedly penetrated the net of the Collegiate L-Screen Net with Hood (“the L-Screen”) he sat behind.²⁸ Twigg sustained serious injuries after the ball struck him in his right eye.²⁹ He underwent three unsuccessful surgeries and eventually lost his eye.³⁰

Twigg claims he inspected the L-Screen before practice began by “tug[ing]” on the net and visually inspecting it.³¹ Two members of the baseball team could not corroborate Twigg’s claim,³² but one testified that “Twigg wouldn’t have got behind an L-screen that had a hole in it.”³³

²⁷ Doc. 78 (Varsity Brands, BSN, and SSG Statement of Material Facts) at ¶ 6; Doc. 81 (Plaintiffs’ Statement of Material Facts) at ¶ 11; Doc. 87 (Garware’s Statement of Material Facts) at ¶ 1.

²⁸ Doc. 78 at ¶¶ 14-15; Doc. 81 at ¶ 19; Doc. 87 at ¶ 2. Garware admits to this distance in response to Plaintiffs’ SMF. Doc. 93 (Garware Opposition to Plaintiffs’ Motion for Summary Judgment) at ¶ 19.

²⁹ Doc. 81 at ¶ 32.

³⁰ *Id.*

³¹ Doc. 88 (Plaintiffs’ Exhibit List), Ex. E (Twigg Dep.) at 111:12-19.

³² Doc. 91 (Garware’s Brief in Opposition), Ex. C (Verrico Dep.) at 15:17-20, Ex. G (Wood Dep.) at 15:8-11.

³³ Doc. 88, Ex I (Wood Dep.) at 15:4-7.

2. The Safety Net

Garware manufactured the polyethylene safety net for BSN's L-Screen product.³⁴ The net's anticipated service life was "in excess of five years" under "standard use" conditions.³⁵ Prabhakar Chandrachud, the Director and President of Garware USA,³⁶ stated that products like this are "designed according to the specification[s] given" by Garware's customers.³⁷ BSN and Garware discussed the net's design specifications from March 2016 through July 2016.³⁸ During this period, Garware also provided BSN with a prototype net,³⁹ which BSN claims it tested by pitching balls at it for approximately a week.⁴⁰ Chandrachud acknowledged that Garware's customers may "demand" it test the netting.⁴¹ But he did not mention any kind of simulated pitching testing for this product, and Garware's records only show that it tested the twine from production lots in November and December 2016 pursuant to the following International Organization for Standardization ("ISO")

³⁴ Doc. 87 at ¶ 19.

³⁵ Doc. 88, Ex. R (BSN Rep. Dep.) at 58:16-22.

³⁶ Garware USA is a wholly owned subsidiary of Garware Technical Fibers India. Doc. 91, Ex. H (Chandrachud Dep.) at 9:14-19.

³⁷ *Id.* at 45:2-3.

³⁸ *Id.* at 56:23-57:1; Doc. 88, Ex. Q (Email Exchange).

³⁹ Doc. 88, Ex. Q (Email Exchange).

⁴⁰ *Id.*, Ex. R (Piombino Dep.) at 57:10-18, 63:9-11

⁴¹ Doc. 91, Ex. H at 28:1-5.

standards: ISO 1805,⁴² ISO 2060,⁴³ and ISO 2061⁴⁴ (“the 2016 test results”).⁴⁵ Garware did not certify the 2016 test results as BSN did not request a test certificate.⁴⁶

Garware then sold the relevant batch of nets to BSN on January 31, 2017.⁴⁷ BSN noted that the nets would “go generally into stock and go out of [its] inventory as soon as a customer order came in.”⁴⁸ A BSN Order Confirmation indicates that the High School ordered two L-Screens on December 7, 2017, with an estimated delivery date of December 11, 2017.⁴⁹ The High School also received an invoice on December 11, 2017 that provided a due date of January 10, 2018.⁵⁰ The L-Screens only came with instructions on how to assemble the metal frame and net.⁵¹

⁴² ISO 1805 (Fishing nets – Determination of breaking force and knot breaking force of netting yarns). Doc. 88, Ex. M (Clark Initial Report) at 3.

⁴³ ISO 2060 (Textiles – Yarn from packages – Determination of linear density (mass per unit length) by the skein method). *Id.*

⁴⁴ ISO 2061 (Textiles – Determination of twist in yarns – Direct counting method). *Id.*

⁴⁵ These lots had production dates of November 18, November 24, November 25, November 27, November 29, December 1, December 2, December 4, December 5, December 6, December 7, December 17, December 19, December 20, December 21, and December 22, 2016. Doc. 88, Ex. N (2016 test results). *See also* Doc. 91, Ex. H at 98:4-7.

⁴⁶ Doc. 91, Ex. H at 94:15-95:3.

⁴⁷ Doc. 78 at ¶¶ 8-9; Doc. 95 at ¶¶ 8-9.

⁴⁸ Doc. 88, Ex. R at 83:13-15.

⁴⁹ Doc. 88, Ex. A (Investigation File) at 34.

⁵⁰ *Id.* at 15.

⁵¹ *Id.* at 35-45. *See also* Doc. 88, Ex. R at 44:14-18, 57:25-58:2; Doc. 91, Ex. H at 109:22-110:7;

3. The 2022 Test Certificate

Gareware also produced a test certificate that contained certified ISO test results on nets produced in 2021 (“the 2022 test certificate”).⁵² This signed certificate concluded that “[a]ll breaking strength results are as per specification.”⁵³

4. The High School’s Use of the L-Screen

Twigg testified that the L-Screens were not used outside.⁵⁴ But Jeremy Eck, the head baseball coach, testified that he “can’t tell...if [the relevant] nets were [used] inside [or] outside, but we do take L screens inside and outside based off of the season.”⁵⁵

Twigg was also “not sure” if these nets entered use in 2018 as the team “cycle[s] through nets.”⁵⁶ As to the length of use, again Twigg and Eck differed in their estimations. Twigg claimed that indoor batting practice with the L-Screens only began in February and March.⁵⁷ When asked how he goes “about scheduling the use of the batting cages in the auxiliary gym,” Eck testified that he reserves a time “starting in November” that “will be our time until the baseball season starts and [then] we go outside.”⁵⁸

⁵² Doc. 88, Ex. P (2022 Test Certificate).

⁵³ *Id.*

⁵⁴ *Id.*, Ex. E at 48:21-23.

⁵⁵ Doc. 91, Ex. B (Eck Dep.) at 31:12-23.

⁵⁶ Doc. 88, Ex. E at 111:12-19.

⁵⁷ *Id.* at 32:21-33:2.

⁵⁸ *Id.*, Ex. F (Eck Dep.) at 20:4-21.

5. Zip Ties on the Net

Twigg testified that there were no zip ties on the net on the day of the accident,⁵⁹ and no zip ties are present in a photograph taken some point after the accident.⁶⁰ But Joel Verrico, the batter involved in the accident, testified that he “believe[d] there were” zip ties around the L-Screen as they “put zip ties around all of” their nets.⁶¹ He further clarified that they would only use zip ties if “only one side had a hole” in the net.⁶²

When viewing the L-Screen a week after the accident, the High School’s then-Principal Daniel Taormina “noticed several zip ties holding the net to the frame.”⁶³ Brandy Smith, the School District’s Business Manager, testified that she spoke with Taormina about the baseball team’s use of zip ties before the accident, but she had not personally seen the nets before the accident.⁶⁴ According to Smith, Evelyn Wynn, the School District’s Athletic Director, told her that zip ties were on the net the day of the accident.⁶⁵

⁵⁹ *Id.*, Ex. E at 48:6-8.

⁶⁰ *Id.*, Ex. H (Photo of Net).

⁶¹ *Id.*, Ex. G at 21:15-16, 21:22-24.

⁶² *Id.* at 22:3-10.

⁶³ Doc. 91, Ex. E (Taormina Dep.) at 18:14-24.

⁶⁴ Doc. 78, Ex. F (Smith’s Dep.) at 26:3-10.

⁶⁵ *Id.* at 27:5-22.

6. Use of the Net after the Accident

After the accident, the net was put back into service by zip tying another net on top of it,⁶⁶ but Twigg contends that the two nets were removed from use “on or about May 9, 2019.”⁶⁷ While Eck had double layered nets in the past, he was unsure if that occurred with the net involved in this accident.⁶⁸ An email from Wynn to Jessica Reich, a Business Office Specialist for the School District, indicated BSN “replaced the nets for” free and that “the new nets were placed over top of the damaged nets by the coaching staff.”⁶⁹

Reich also confirmed that two nets with zip ties were on the single L-Screen frame after it was removed from the auxiliary gym in May 2019, and she directed maintenance staff to remove the nets from the L-Screen and place them in a box for storage in mid-May 2019.⁷⁰

7. Other BSN Products

Another safety net sold on BSN’s website displayed the batter a short distance from the net, and BSN also separately sold padding to attach to the L-Screen metal frame with zip ties as a safety accessory.⁷¹

⁶⁶ Doc. 81 at ¶ 34; Doc. 88, Ex. E at 119:19-120:10.

⁶⁷ Doc. 88, Ex. L (Reich Dep.) at 24:25-25:4.

⁶⁸ *Id.* at 36:6-8.

⁶⁹ *Id.*, Ex. K (Montoursville Emails).

⁷⁰ *Id.*, Doc. L (Reich Dep.) at 21:16-22:2, 29:20-32:9.

⁷¹ *Id.*, Ex. C (BSN Answers to Request for Admissions) at No. 62; Doc. 112 (*Daubert* Hearing Transcript) at 70:9-18.

8. Plaintiffs' Expert Reports

a. Dale Clark's Professional Background

Dale Clark is an engineer and metallurgist with over twenty years of experience.⁷² His education and professional career have familiarized him with general concepts of product design,⁷³ forensic engineering, and failure analysis.⁷⁴ He has authored the “[m]aterials and mechanical engineering aspects” of a report that evaluated the design of a fall restraint device⁷⁵ and participated in various failure analysis projects.⁷⁶

b. Clark's Initial Report

In his first report,⁷⁷ Clark evaluated the results of mechanical and materials testing performed on the netting to reach the following conclusions:

“[First,] the pitching net material does not currently meet the minimum mechanical properties indicated by Garware.

[Second,] the pitching net material has undergone oxidative degradation which may have reduced its mechanical properties.

⁷² Doc. 88, Ex. M at 2.

⁷³ Doc. 112 at 79:19-25.

⁷⁴ Doc. 88, Ex. M at 2.

⁷⁵ Doc. 112 at 81:19-83:13.

⁷⁶ *Id.* At the *Daubert* hearing, Clark indicated that he has performed testing analysis of polyethylene pipes involved in water system failures; Cresline polyethylene pipes used in hydronic systems; welded base plates from high power towers; and sporting equipment found at trampoline gyms and rock-climbing facilities. *Id.* at 58:10-24.

⁷⁷ When drafting the report, Clark reviewed ISO standards 1805, 1806, and 2061. Doc. 88, Ex. M at 3. He also had access to depositions from the following individuals, amongst other materials: Corey Twigg; Lori Twigg; Jessica Reich; Jeremy Eck; Don Piombino; and Prabhakar Chandrachud. *Id.*

[Third,] given the short service li[f]e and limited environmental exposure of the pitching nets, the severity of damage and degradation observed suggests that the netting material is either insufficiently durable to resist mechanical damage or insufficiently stabilized to prevent oxidative degradation under service conditions.”⁷⁸

i. Mechanical Testing

Clark concluded that the net “failed to meet [in 2023] the minimum breaking strength and knot breaking strength requirements” used by Garware after comparing the 2016 test results to the Vartest test results.⁷⁹

ii. Materials Testing

Clark also analyzed the results of the Fourier Transform Infrared Spectroscopy (“FTIR”) testing that was performed in 2021.⁸⁰ These results indicated that “the netting material had undergone some degree of oxidative degradation.”⁸¹ Clark based this conclusion on the carbonyl index, “a method for monitoring thermal and ultraviolet degradation of polyolefin materials such as polyethylene.”⁸² This technique “does not provide a precise quantitative measurement of degradation,” but it instead qualitatively assesses the “presence of oxidative degradation in the material.”⁸³

⁷⁸ *Id.* at 7.

⁷⁹ *Id.*

⁸⁰ FTIR “outputs a spectrum” that is then compared “to known spectra to identify chemical species present in the sample testing” according to ASTM methodologies. Doc. 112 at 112:18-24.

⁸¹ Doc. 88, Ex. M at 7.

⁸² *Id.* at 6.

⁸³ *Id.* at 7.

iii. Clark's Analysis of the Testing

Clark then performed a straightforward analysis. He noted that oxidative degradation had occurred, which is “consistent with the drop in mechanical properties.”⁸⁴ Then, Clark made two factual observations: (1) the nets were “not exposed to significant ultraviolet light or unusually high temperatures and [would] not be expected to undergo substantial thermal or UV degradation”⁸⁵ and (2) the net had suffered only moderate use.⁸⁶ Under these circumstances, Clark concluded that “the netting material is either insufficiently durable to withstand the physical requirements of its intended use or insufficiently stabilized to resist oxidative degradation.”⁸⁷

c. Clark's Rebuttal Report

Clark's rebuttal report contests parts of the expert report authored by Bruce Snigger, a textiles specialist who claims the High School misused the net.⁸⁸ Clark highlighted the lack of instructions specifying a minimum safe distance from the batter and noted that the net was within its intended service life.⁸⁹ He also rebutted

⁸⁴ *Id.*

⁸⁵ *Id.* at 4, 7.

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ Doc. 88, Ex. V (Snigger Report).

⁸⁹ Doc. 88, Ex. X (Clark Rebuttal).

the claim the net was damaged.⁹⁰ As explained, Clark concluded the drop in mechanical qualities occurred only after normal use of the net.⁹¹

i. The Vartest Testing

As to the mechanical testing performed, Clark emphasized that forensic investigations always involve “used” materials and unknotting the yarn samples is “a function of necessity when testing an end-use product.”⁹² Clark also noted that the lack of any outliers in the testing to defend the adherence to the ISO 1805 methodology and indicated he could not address any issues with the twist rate counting methodology.⁹³

d. Clark’s Supplemental Report⁹⁴

In his supplemental report,⁹⁵ Clark discussed product design and warnings and reached the following conclusion: “The subject L-screen net is defective per the definition in the Code of Federal Regulations Title 16, Chapter II, Subchapter B, Part 1115.”⁹⁶

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.*

⁹⁴ In this report, Clark also provided additional responses to the expert reports retained by Defendants.

⁹⁵ Clark had access to the following additional depositions when he prepared this report: Brandy Smith; Daniel Taormina; Joel Verrico; Cameron Wood; and Evelyn Wynn. Doc. 88, Ex. Y (Clark Supplemental Report) at 3-4.

⁹⁶ *Id.* 13.

i. The Design Process

The design process requires the establishment of appropriate parameters to ensure the product can function for its intended use and foreseeable use and misuse conditions.⁹⁷ For the L-Screen net, this process “would include determining how strong and durable the netting material needs to be.”⁹⁸

ii. Foreseeable Use and Misuse of the Net

Clark provided definitions of foreseeable use and misuse from the ISO and the Consumer Product Safety Commission (“CPSC”).⁹⁹ He further explained that foreseeable use and misuse are evaluated by looking to “similar products” and possibly discussing the product with end-users.¹⁰⁰ With this understanding, Clark contends that “any location of the subject L-screen net relative to the batter qualifies as a foreseeable use and should be accounted for in the product’s design and specifications.”¹⁰¹ He relies on the presence of short-range batting screens on BSN’s

⁹⁷ Doc. 112 at 71:9-17. At the *Daubert* hearing, he provided examples of this process. He noted that for fall protection gear, “you actually perform a drop test on it” as opposed to just measuring the strength of the webbing. He also indicated “[t]he same is true for safety glasses. They are not tested just by hardness, which is material property or strength. They are actually impact tested.” *Id.* at 73:6-14.

⁹⁸ Doc. 88, Ex. Y at 4.

⁹⁹ The ISO defines foreseeable misuse as “improper or incorrect use of a product that is capable of being known or anticipated in advance, based on a supplier’s best knowledge about the product and human behavior.” *Id.* at 5. The CPSC defines foreseeable use to include “the use intended by the manufacturer, and uses that were not intended but can reasonable be expected to occur.” *Id.*

¹⁰⁰ Doc. 112 at 74:4-13.

¹⁰¹ Doc. 88, Ex. Y at 6.

website, the lack of any “specified minimum safe distance for” BSN’s products, and videos of batting practice to reach this conclusion.¹⁰²

iii. Hazard Analysis

Hazard analysis “is the identification of potentially hazardous conditions and relevant human factors which may affect the product safety.”¹⁰³ This analysis should progress along three levels: “design, guard, warn.”¹⁰⁴ Clark readily acknowledged that he does not design L-Screens and that he is unfamiliar with the practices of other manufacturers.¹⁰⁵ But he believed a “minimum safe working distance” should have been identified through this process and the net should have been stabilized “against oxidation” to prevent “deterioration.”¹⁰⁶

iv. The Net is Defective

He proceeded to note that the “[f]ailure to address a hazard resulting from manufacture or use of a product may render the product defective” under the Consumer Product Safety Act (“CPSA”)¹⁰⁷ and then concludes that “the subject L-

¹⁰² *Id.*

¹⁰³ *Id.* at 7.

¹⁰⁴ *Id.* at 7.

¹⁰⁵ Doc. 112 at 84:18-20; 85:14-20.

¹⁰⁶ *Id.* at 84:1-17.

¹⁰⁷ Doc. 88, Ex. Y at 7-8. The relevant part of the Code of Federal Regulations (“CFR”) defines a defect as “a fault, flaw, or irregularity that causes weakness failure, or inadequacy in a form or function.” *Id.* This portion of the CFR further indicates that “a product may contain a defect even if the product is manufactured exactly in accordance with its design and specifications, if the design presents a risk of injury to the public. A design defect may also be present if the risk of injury occurs as a result of the operation or use of the product or the failure of the product to operate as intended.” *Id.*

screen net was defective either due to the design resulting in the net being insufficiently strong or durable to function correctly under foreseeable use conditions, or due to the lack of instructions or warnings addressing foreseeable use and misuse of the product.”¹⁰⁸

e. Stephen Pfriem’s Professional Background

Stephen Pfriem has ten years of experience as ICS Laboratories’ manager of quality and compliance.¹⁰⁹ He supports manufacturers and distributors of safety products with quality control, design development, and compliance.¹¹⁰ Pfriem is ordinarily familiar with the characteristics of these products as he assists with “molding decisions,” “manufacturing production process decisions,” and evaluating the “useful life” of the product as it ages.¹¹¹

To prepare his report, Pfriem reviewed several deposition transcripts, the 2016 test results, the 2022 test certificate, the relevant ISO standards, and other safety product standards.¹¹²

¹⁰⁸ *Id.* at 8.

¹⁰⁹ Doc. 88, Ex. T (Pfriem Report) at 1. ICS Laboratories specializes in “assessing the performances, material characteristics, labeling, and other aspects of personal protective equipment (PPE) used in occupational, educational, and recreational settings.” *Id.* at 1.

¹¹⁰ Doc. 112 at 18:5-8.

¹¹¹ *Id.* at 44:8-15.

¹¹² These included the transcripts for Piombino, Chandrachud, Twigg, and Lori Twigg. Doc. 88, Ex. T at 2.

f. Pfriem's Report

Pfriem offers two key opinions: (1) Defendants failed to properly develop performance specifications for the net and (2) insufficient documentation exists for the 2016 test results and the alleged simulated hazard testing performed by BSN.¹¹³

His first conclusion is based on the lack of “evidence that the specified break strengths communicated by BSN/Varsity to Garware were based on a scientific determination that said specifications corresponded to the net’s ability to resist the force of a batted baseball”¹¹⁴ and the lack of minimum performance metrics in the ISO standards relied upon by Defendants.¹¹⁵

As to the second conclusion, even though he did not have reason to doubt the “trustworth[iness]”¹¹⁶ of the 2016 test results, this document lacked “many of the metrologically expected details.”¹¹⁷ Further, “[s]imply testing the material characteristics” of the net “is insufficient.”¹¹⁸ He is unaware “of any manufacturer who willfully chooses to do partial testing of a component of their product instead of complete testing of the product against a reasonably simulated hazard.”¹¹⁹ This failure is a “departure from a basic principle of design qualification in industrial

¹¹³ *Id.* at 4-6.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ Doc. 112 at 41:4-12.

¹¹⁷ *Id.* at 38:9-16.

¹¹⁸ Doc. 88, Ex. T at 6.

¹¹⁹ Doc. 112 at 36:17-22.

engineering.”¹²⁰ While BSN claims to have done so, Pfriem “saw no records that testing was done or what the testing really was” but acknowledged it “may have informed the manufacturers’ confidence in the product” if it was actually performed.¹²¹ “Therefore, the limited test protocol and available records...are inexcusably basic and insufficiently connected, in a technically cogent manner, to the known hazard.”¹²²

D. The *Daubert* Challenges

1. Challenges to Pfriem

a. Pfriem’s Qualifications

Pfriem’s lack of a technical background does not render him unqualified to provide an opinion in this case. He is intimately familiar with the subject of his opinion: the norms of safety product testing and the expected accompanying documentation. At the *Daubert* hearing, Pfriem clarified that he often advises manufacturers and distributors of safety products on manufacturing and design decisions.¹²³ This experience qualifies him to expound on general principles of designing a safety product, including protecting against known hazards and verifying the “manufacturing process” through reliable records of testing.¹²⁴

¹²⁰ *Id.* at 37:21-22.

¹²¹ *Id.* at 37:18-25.

¹²² Doc. 88, Ex. T at 6.

¹²³ Doc. 112 at 44:8-15.

¹²⁴ Doc. 88, Ex. T at 7.

Through this role, as Defendants note, Pfriem naturally learns the characteristics of the product he is evaluating. But this familiarity is merely a by-product of this work, not a requirement for his assessment of the product's testing protocols. Pfriem's purported failure to perform additional research into the L-Screen product does not make him unqualified to provide his opinion in this case.¹²⁵

While this does not directly impact Pfriem's qualifications, I will address Pfriem's knowledge of simulated hazard testing performed by other manufacturers of L-Screens.¹²⁶ First, I reiterate that Pfriem would be qualified to evaluate the adequacy of the testing protocols and the accompanying documentation without any familiarity with the product. But Pfriem explained he became aware of other manufacturers' practices at the *Daubert* hearing, information he had not previously disclosed.¹²⁷ "Federal Rule of Civil Procedure 26(a)(2)(B)(i) requires that expert reports contain 'a complete statement of all opinions the witness will express and the basis and reasons for them[.]'"¹²⁸ "If a party fails to provide information or identify a witness as required by Rule 26(a) or (e), the party is not allowed to use that information or witness to supply evidence on a motion, at a hearing, or at a trial,

¹²⁵ Garware also contends that this lack of familiarity renders his opinion unreliable. My observation that he is familiar with products at ICS Laboratories as a by-product of his work similarly applies here. It is not necessary for him to have performed additional research into L-Screen nets to evaluate whether the testing procedure and the accompanying documentation met industry expectations for the development of a safety product.

¹²⁶ Doc. 113 (Varsity Brands, BSN, SSG Supplemental Brief) at 4.

¹²⁷ Doc. 112 at 35:1-7.

¹²⁸ *Parallel Networks Licensing, LLC v. IBM*, Civ. A. No. 13-2072 (KAJ), 2017 WL 1405155, 2017 U.S. Dist. LEXIS 58394, at *3 (D. Del. Apr. 17, 2017) (quoting FED. R. CIV. P. 26).

unless the failure was substantially justified or it is harmless.”¹²⁹ But this is the exact kind of testing that BSN claims to have performed, thereby rendering Pfriem’s lack of disclosure harmless.¹³⁰ The parties also had the opportunity at the *Daubert* hearing to further explore this issue.¹³¹

b. Reliability of Pfriem’s Opinion¹³²

First, I note that I have already rejected Defendants’ arguments that Pfriem needed to familiarize himself with the L-Screen. Pfriem has sufficient expertise to evaluate the design process employed by Defendants and a lack of L-Screen specific knowledge would not render this evaluation unreliable. His opinion is also unaffected by the High School’s subsequent use of the net, as his focus is on Defendants’ actions during the net’s development. And, critically, Pfriem received all the necessary information to form his opinion, even if that information came solely from Plaintiffs’ counsel.¹³³

Next, Defendants challenge the reliability of Pfriem’s discussion of the adequacy of the testing performed. The ISO standards used by Defendants lack minimum performance requirements.¹³⁴ Consequently, accepting the ISO standards

¹²⁹ FED. R. CIV. P. 37(c).

¹³⁰ Doc. 88, Ex. R at 45:23-46:1.

¹³¹ Doc. 112 at 35:1-25.

¹³² Plaintiffs failed to respond to certain aspects of Garware’s motion challenging the reliability and fit of Pfriem’s testimony. While I could grant the motion to the extent it is unopposed, I decline to do so.

¹³³ Doc. 88, Ex. T at 2.

¹³⁴ *Id.* at 5.

as authoritative is not inconsistent with concluding that sufficient testing did not occur. Nor do these observations require Pfriem to identify what performance specifications would have been appropriate. In fact, doing so would improperly extend beyond the scope of Pfriem's opinion as he did not perform any mechanical testing on the safety net.

His discussion of simulated hazard testing is similarly reliable. He used his experience to identify an acceptable, feasible alternative testing method for safety products.¹³⁵ No additional knowledge of L-Screen netting is required under these circumstances. Further, Pfriem properly declined to definitively state whether BSN's alleged simulated hazard testing is sufficient. Without any records, it is impossible to evaluate the sufficiency of this alleged testing due to the level of detail Pfriem articulated is required for adequate testing records. His recognition that other manufacturers perform this kind of testing is not inconsistent with this response given this lack of records.

Ultimately, Defendants appear to ask the Court to disregard the guidance surrounding experience-based expertise. "[E]xpert testimony may be based on experience so long as that experience provides appropriate validation for the

¹³⁵ The feasibility of this testing method is demonstrated by two aspects of the record. First, Pfriem points to recognized standards for the testing of baseball safety products that incorporate simulating the relevant hazard. *Id.* at 2. Second, BSN itself claims to have performed this kind of testing. Doc. 88, Ex. R at 57:10-18, 63:9-11; Doc. 112 at 36:9-22.

proposed testimony.”¹³⁶ As this Court has already expounded at length, that is precisely what Pfriem has done. Nor does BSN’s discussion of *Meadows v. Anchor Longwall & Rebuild, Inc.*,¹³⁷ a 2009 non-precedential decision from our Court of Appeals, lend credence to this argument. The expert testimony at issue in *Meadows* is fundamentally distinct from Pfriem’s proposed testimony. He does not offer any opinions which would require replicating the conditions of the accident, examining the safety net, or familiarizing himself with the design and manufacture of the netting.

Finally, Garware challenges the following statement Pfriem made at his deposition:

I believe the opinion I offered can generally be understood to be an opinion on the cause of the accident, which is the under designed and under testing or the inappropriate testing protocol that the net was subject to prior to its release for consumer use based on the materials that I reviewed.¹³⁸

Accordingly, I take a moment to clarify that Pfriem may identify appropriate testing protocols for safety products,¹³⁹ the expected supporting documentation, and the communication between Defendants on the development of performance specifications. These aspects of his opinion would allow him to conclude that the net

¹³⁶ *Sense v. Liberty Mut. Ins. Co.*, 661 F. App’x 771, 775 (3d Cir. 2016).

¹³⁷ 306 F. App’x 781 (3d Cir. 2009).

¹³⁸ Doc. 79, Ex. L (Pfriem Dep.) at 69:6-12.

¹³⁹ The Court uses the phrase “testing protocols” to encompass using consensus developed standards or simulating the hazard the product is designed to protect against.

had been under tested to verify its design. But he is not allowed to testify that the net, at the time of its production in 2016, would not have met the performance specifications used by Defendants, as that is well outside the scope of his opinion.¹⁴⁰

c. The Fit of Pfriem's Opinion

Defendants' arguments concerning the fit of Pfriem's opinion are similarly unpersuasive. After all, the fit "standard does not require plaintiffs to 'prove their case twice.'"¹⁴¹ The Twigg do not need to "demonstrate...by a preponderance of the evidence that the assessments of their experts are correct, they only have to demonstrate by a preponderance of the evidence that they are reliable."¹⁴² Here, Pfriem has provided a well-developed opinion based upon his professional experience.

Further, his recognition that the ISO standards are authoritative does not render his opinion unhelpful. As I have already explained, his opinions are consistent with his acceptance of the ISO standards as authoritative, and his use of other standards simply serves to demonstrate the feasibility of simulated hazard testing.

Finally, I clarify an apparent misunderstanding as to the role of Pfriem's opinion. Defendants assert that his opinion does not fit the needs of this case as it

¹⁴⁰ At the hearing, he testified that he "cannot tell you definitively that the net would not have passed because it would be a total breach of the basic principles of objective metrology" when asked whether he could state "that this particular net wouldn't pass" any kind of simulated hazard testing. Doc. 112 at 51:15-17.

¹⁴¹ *ID Sec. Sys. Can., Inc. v. Checkpoint Sys.*, 198 F. Supp. 2d 598, 603 (E.D. Pa. 2002) (quoting *Oddi v. Ford Motor Co.*, 234 F.3d 136, 145 (3d Cir. 2000)).

¹⁴² *In re Paoli*, 35 F.3d at 744.

does not address causation. But when evaluating fit, the Court asks, “whether [the] expert testimony proffered...is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute.”¹⁴³ Here, that is clearly the case. Pfriem notably questions the relevance of the 2016 test results and the occurrence of simulated hazard testing. His opinion therefore would allow a jury to infer that Defendants did not adequately test the design of the net. While this inference alone would not establish causation, it need not do so to render Pfriem’s report admissible.

2. Challenges to Clark

a. Clark’s Initial Report

Defendants challenge the reliability of Clark’s report by contesting the adequacy of the facts he relied upon and his observations of the net’s characteristics. But Clark’s opinions are not unreliable simply because he received limited information from Plaintiffs’ counsel.¹⁴⁴ The state of the safety net at the time of the accident is a strongly contested fact, and Clark’s opinion reliably flows from the Plaintiffs’ factual narrative. The weight the jury gives Clark’s opinion will depend on whose version of events it ultimately finds to be more credible.

i. Durability of the Net

As to Clark’s opinion concerning the durability of the net, he concluded the net does not currently meet the minimum mechanical properties after comparing the

¹⁴³ *United States v. Schiff*, 602 F.3d 152, 173 (3d Cir. 2010).

¹⁴⁴ I note that this objection would similarly apply to Clark’s rebuttal report.

2016 test results to the Vartest test results.¹⁴⁵ Under the Plaintiffs’ disputed factual narrative, this decline in the net’s mechanical properties occurred after only minimal, indoor use of the safety net and its subsequent storage by the High School.¹⁴⁶ This factual narrative enabled Clark to infer that the net was insufficiently durable to last its intended service life. Relying on this inference does not render his opinion speculative and it adequately accounts for the gap in time between the net’s manufacture and the Vartest testing.¹⁴⁷ That is so even with Clark’s acknowledgment that further use would result in additional degradation,¹⁴⁸ as he is entitled to rely upon disputed facts in the record. Defendants may certainly challenge before the jury Plaintiffs’ characterization of the use of the net, but that does not justify excluding the Initial Report.

While Clark’s opinion does not directly speak to the net’s durability at the time of its manufacture,¹⁴⁹ this also does not render his opinion unreliable or risk misleading the jury. Clark articulates a prolonged deterioration of the net’s mechanical properties that occurred during the High School’s minimal use and eventual storage of the net; he has not asserted that the net did not meet these performance metrics in 2016, nor could he given the uncontested 2016 test results.

¹⁴⁵ Doc. 88, Ex. M at 6-7.

¹⁴⁶ *Id.* at 7-8.

¹⁴⁷ Doc. 88, Ex. L at 30:4-12.

¹⁴⁸ Doc. 112 at 105:21-106:2.

¹⁴⁹ He reinforced this point at the *Daubert* hearing where he asserted that he is “not arguing...that [the net] never met [the minimum performance specifications] or that it wouldn’t have brand new.” *Id.* at 104:23-25.

Be that as it may, this opinion is still a reliable explanation of his analysis of the mechanical testing under Plaintiffs' preferred factual narrative. As Clark's conclusions reliably flowed from this analysis, no additional mechanical testing was required.

ii. Stability of the Net

Clark's observations on the stabilization of the net are derived from the results of the FTIR testing. At the *Daubert* hearing, Clark explained a "carbonyl index of less than [0.02] is considered to be pretty normal" and that it "probably" would not "affect the properties."¹⁵⁰ He then explained that a "[c]arbonyl index of [0.1] is generally accepted to be the material is embrittled and degraded and going to break easily."¹⁵¹ The carbonyl index numbers calculated from the samples of the net in this case were 0.03, 0.04, and 0.06.¹⁵² BSN aptly points out that these values do not indicate embrittlement, but Clark has not argued that. He simply indicated these figures show "oxidative degradation has occurred" and that "a strongly stabilized material" that would last "for many years of service...wouldn't show carbonyls" and that they "would be less than" 0.02.¹⁵³ He then connects this assessment to disputed facts of this case: the High School's use of the net indoors within its anticipated

¹⁵⁰ *Id.* at 113:19-23.

¹⁵¹ *Id.*

¹⁵² *Id.* at 114:2-5.

¹⁵³ *Id.* at 114:15-20.

service life. This deterioration therefore supports the inference that the net was insufficiently stabilized.

Clark did not perform a deliberate acceleration of the aging of the net's material,¹⁵⁴ but again nothing compels the Court to require that analysis when his opinion is adequately based upon disputed aspects of the record. He articulated what the FTIR testing results indicated and then explained how a product with an extended service life would not be expected to degrade.¹⁵⁵ For the conclusions he reached, that is all he had to do. He is not directly testifying to the level of degradation of the net at the time of the accident. No alternative explanations for the degradation of the net beyond insufficient stabilization and durability exist under Plaintiffs' factual narrative, and he has clarified that a properly stabilized product would not be expected to show carbonyls within its expected service life.¹⁵⁶

Clark also identified possible causes of degradation,¹⁵⁷ none of which appear to have been present for the use and storage of the net since its manufacture. This would allow a juror to infer that the degradation occurred during its actual use by the High School. Again, these disputed facts could certainly be challenged by Defendants at trial, but they prevent exclusion of Clark's analysis on this issue.

¹⁵⁴ *Id.* at 114:6-14.

¹⁵⁵ *Id.* at 114:2-20.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.* at 113:14-18.

Finally, Defendants argue that Clark’s failure to adequately consider the disputed facts of the case, due to Plaintiffs’ counsel’s initial selective disclosure of information, renders his opinion unreliable. This criticism drives at Clark’s failure to address an “obvious alternative explanation” for the cause of the accident: the High School’s misuse of the net.¹⁵⁸ If Clark had only authored the Initial Report in this case, that would indeed be a problem. But Clark received the additional information Defendants have deemed necessary when he prepared his Supplemental Report.¹⁵⁹ In that report, he notably disputed, at length, Bruce Snigger’s characterization of the damaged state of the net that relied upon these additional materials.¹⁶⁰ In doing so, he defended the factual narrative he relied upon in his Initial Report, thereby implicitly affirming its findings. Consequently, unlike the expert in *Miller v. United States*, Clark did more than conclude Twigg’s “injury was caused by the accident essentially because [Twigg] told him it was.”¹⁶¹ He analyzed the results of materials and mechanical testing and then connected those conclusions to the factual narrative he deemed persuasive. As became evident at the *Daubert* hearing, Clark also articulated how this opinion would be altered by the disputed facts favorable to Defendants’ description of the net.¹⁶² Under these circumstances,

¹⁵⁸ *Miller v. United States*, 287 F. App’x 982, 984 (3d Cir. 2008).

¹⁵⁹ When preparing his Supplemental Report, Clark had access to the Taormina, Smith, Wood, Verrico, and Wynn deposition transcripts. Doc. 88, Ex. M at 3.

¹⁶⁰ *Id.* at 8-11.

¹⁶¹ *Miller*, 287 F. App’x at 984.

¹⁶² Doc. 112 at 105:21-106:2.

exclusion of Clark's opinion is not warranted as it is neither unreliable nor misleading. Naturally, if jurors resolved the disputes over the High School's use of the net in Defendants favor, they would simply discard Clark's opinion.

b. Clark's Rebuttal Report

Clark appears to have relied only on the changes in the breaking strength and knot breaking strength of the net in his analysis of the mechanical testing results.¹⁶³ His inability to speak to the issues Snigger identified with Vartest's adherence to the ISO 2061 procedures does not affect the reliability of his opinion.

c. Clark's Supplemental Report

i. Design

Clark testified to having a general background in design, but he did not perform any research into the design and manufacture of L-Screen safety nets.¹⁶⁴ As such, he is not qualified to discuss specific design modifications that could be made to the L-Screen safety net or different testing protocols that may be used. Consequently, Clark is limited in his testimony regarding the design of safety products to general design principles.

¹⁶³ Doc. 88, Ex. M at 6 ("This is further supported by the mechanical testing data from Vartest, which shows that the netting material does not meet the strength specifications indicated on the Garware test certificate and Garware testing data").

¹⁶⁴ Doc. 112 at 83:14-17.

ii. Warnings

Based on his educational and professional experiences, Clark is qualified to discuss warnings and how they fit into the product development process through the safety hierarchy. Despite Defendants objections to the contrary, Clark is also qualified to identify certain hazards that would be evaluated through the safety hierarchy, including the distance of the net from the batter¹⁶⁵ and the storage conditions of the net.¹⁶⁶ But Clark is not permitted to expand his testimony by identifying other hazards, how the safety hierarchy would address these issues, or what an appropriate warning would say.

iii. Foreseeable Use and Misuse

At the *Daubert* hearing, Clark described the intended use of a product as the use a developer is “deliberately intending [the product] to be used for.”¹⁶⁷ He then contrasted this definition from foreseeable use and misuse, which are “defined within text as considering human interaction and behavior, what else might someone use it for.”¹⁶⁸ He further acknowledged that “in engineering classes when they teach about it and in various texts, they do reference, you need to go out and look at similar

¹⁶⁵ His review of Defendants’ expert reports, the other BSN products identified by Plaintiffs, and other, relevant safety standards renders him qualified to discuss this issue.

¹⁶⁶ He is qualified to discuss this issue due to his experience with polyethylene products. I note that Garware makes a separate challenge that Clark is not qualified to evaluate polyethylene materials. His professional experiences clearly encompass experience with these products. *See* Doc. 88, Ex. M at 1-2. Therefore, this objection is not persuasive.

¹⁶⁷ Doc. 112 at 74:4-5.

¹⁶⁸ Doc. 112 at 74:5-8.

product...perhaps discuss it with end users to see how they might use this product to get a better understanding of what use conditions might exist.”¹⁶⁹ He mentioned familiarity with this concept from engineering texts such as ASM International.¹⁷⁰ As Clark tied his understanding of these concepts to his educational and professional background, rather than simply his review of the text of the Consumer Product Safety Act (“CPSA”) and its associated regulations, he is qualified to generally discuss these concepts.

In reaching this determination, I note that Clark is also limited in his testimony on this point to these general principles and the hazards he is qualified to identify through the safety hierarchy. That does not, however, preclude the Plaintiffs from making arguments to the jury that disputed issues in the record, such as the presence of zip ties on the nets, would qualify as foreseeable use and misuse should that be supported by other record evidence.

iv. Defective Under the Consumer Product Safety Act

Clark is unqualified to state the net is defective under the CPSA. He provided no specific details as to how this Act had arisen in his prior cases.¹⁷¹ To reach the conclusions he did regarding the CPSA, he noted that looked at “the definitions provided in it” and evaluated “[w]hat do those say, what is required, what is the

¹⁶⁹ *Id.* at 74:8-13.

¹⁷⁰ *Id.* at 74:4-25.

¹⁷¹ *Id.* at 87:24-88:2.

design requirement according to the” CPSA.¹⁷² Clark’s argument that the CPSA is an engineering methodology is unpersuasive as well. Even if that were the case, asserting that the net is defective under the CPSA is an impermissible legal conclusion.

d. The Fit of Clark’s Opinion

Finally, Defendants assert that Clark’s opinions are unhelpful as he does not directly describe the net at the time of its manufacture. Again, the disputed factual record, combined with Clark’s observations and conclusions, would allow a juror to infer the net was insufficiently durable and stable at the time of its manufacture.

E. Summary Judgment Analysis

Plaintiffs asserted the following claims against all Defendants in their Complaint: (1) a strict liability claim based on both a design defect and manufacturing defect theory of liability; (2) a failure to warn strict liability claim; (3) a negligence claim; (4) a loss of consortium claim; and (5) punitive damages. Defendants have moved for summary judgment as to all claims,¹⁷³ and Plaintiffs have moved for summary judgment only as to their strict liability claims.

¹⁷² *Id.* at 88:7-10.

¹⁷³ Varsity Brands and SSG also argued that they cannot be held liable for BSN’s involvement in this case. Without any citation for these arguments, I decline to dismiss these two Defendants at this stage.

1. The Strict Liability Claims

The Supreme Court of Pennsylvania has adopted Section 402A of the Restatement (Second) of Torts as its framework for strict liability in the products liability context.¹⁷⁴ Under this framework, “[a] plaintiff may establish a ‘defective condition,’ and thus assert a strict liability claim, by showing that the product suffered from a design defect, failure-to-warn defect, or manufacturing defect.”¹⁷⁵

a. Design Defect Claim

“A plaintiff may prove a ‘defective condition’ exists by showing either ‘(1) the danger is unknowable and unacceptable to the average or ordinary consumer (the ‘consumer expectations standard’) or ‘(2) a reasonable person would conclude that the probability and seriousness of harm caused by the product outweigh the burden or costs of taking precautions’ (the ‘risk-utility standard’).”¹⁷⁶ “Regardless of which test is used, the duty is to provide a product free from a defective condition unreasonably dangerous to the consumer, and liability may be incurred irrespective of fault.”¹⁷⁷ Critically, “[t]he duty involved in strict liability—to produce and/or market a product without ‘a defective condition unreasonably dangerous’—is different from the duty of due care in negligence.”¹⁷⁸

¹⁷⁴ *Webb v. Zern*, 220 A.2d 853, 854 (Pa. 1966).

¹⁷⁵ *Rosenberg v. C.R. Bard, Inc.*, 387 F. Supp. 3d 572, 576 (E.D. Pa. 2019).

¹⁷⁶ *Sikkelee v. Precision Airmotive Corp.*, 907 F.3d 701, 710 (3d Cir. 2018) (quoting *Tincher v. Omega Flex, Inc.*, 104 A.3d 328, 387, 389 (Pa. 2014)).

¹⁷⁷ *Sullivan v. Werner Co.*, 306 A.3d 846, 860 (Pa. 2023).

¹⁷⁸ *Id.*

But these tests only address whether a product was defective; Plaintiffs still must also show that “the defect proximately caused the plaintiff’s injury” and “the defect existed at the time the product left the defendant’s control.”¹⁷⁹

i. The Consumer Expectations Test

“The consumer expectation test defines a ‘defective condition’ as a condition, upon normal use, dangerous beyond the reasonable consumer’s contemplations.”¹⁸⁰ A “product is in a defective condition if the danger is unknowable and unacceptable to the average or ordinary consumer.”¹⁸¹ “The nature of the product, the identity of the user, the product’s intended use and intended user, and any express or implied representations by a manufacturer or other seller are among considerations relevant to assessing the reasonable consumer’s expectations.”¹⁸² This “test has been characterized as reflecting ‘the surprise element of danger’ latent in a product’s use.”¹⁸³ But “a product whose danger is vague or outside the ordinary consumer’s contemplation runs the risk of being subjected to arbitrary application of the strict liability doctrine.”¹⁸⁴ That said, the Pennsylvania Supreme Court has also noted that a product “should be strong enough to perform as the ordinary consumer expects.”¹⁸⁵

¹⁷⁹ *Id.*

¹⁸⁰ *Tichner*, 104 A.3d at 387.

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ *DeJesus v. Knight Indus. & Assocs.*, 2016 U.S. Dist. LEXIS 121697, at *18 (E.D. Pa. Sept. 8, 2016) (quoting *Tichner*, 104 A.3d at 387).

¹⁸⁴ *Tichner*, 104 A.3d at 388.

¹⁸⁵ *Id.*

Unlike “the ordinary consumer of an automobile [who] simply has ‘no idea’ how [an automobile] should perform in all foreseeable situations, or how safe it should be made against all foreseeable hazards,” an L-Screen safety net is “within the common experience of ordinary consumers.”¹⁸⁶ Not only is this a well-known safety product commonly used in our national pastime,¹⁸⁷ but the product’s purpose is also self-evident: the net should be able to protect the individual behind it from incoming balls.

Sufficient evidence in the record would enable a juror to conclude that the safety net suffers from a design defect under this test. First, I note that Pfriem’s testimony, although concerning the conduct of the manufacturer, is still relevant as it questions the adequacy of the performance metrics used for the net. Next, under Twigg’s description of the net, the product did not outwardly display any signs of damage on the day of the accident, and the baseball team had used the net for a limited time indoors.¹⁸⁸ The net was also well-within the net’s expected service life. The batted ball unexpectedly penetrated the safety net and struck Twigg in the eye.

¹⁸⁶ *Soule v. Gen. Motors Corp.*, 8 Cal. 4th 548, 34 Cal. Rptr. 2d 607, 882 P.2d 298, 306 (Cal. 1994). I note that the Pennsylvania Supreme Court favorably cited this application of the consumer expectations test in *Tichner*. *Tichner*, 104 A.3d at 388.

¹⁸⁷ *E.g.*, *Gionfriddo v. Major League Baseball*, 94 Cal. App. 4th 400, 411, 114 Cal. Rptr. 2d 307 (2001) (“Major league baseball is followed by millions of people across this country on a daily basis....”).

¹⁸⁸ While this concerns conduct, as opposed to properties of the product, I make this observation as it is relevant to ensuring that misuse of the product did not occur such that the chain of causation is broken.

These facts sufficiently describe Twigg’s “use of the product” and the “circumstances surrounding the injury.”¹⁸⁹ ”

Clark’s testimony would clarify that the net’s mechanical and chemical properties deteriorated within the expected service life of the net. Unlike “the dangers of a saw’s rotating blade” or “[t]he fact that the speed of a zip line will accelerate with any increased force,” the durability and stability of the net’s materials are not “self-evident” to any user.¹⁹⁰ A reasonable juror could conclude that these deficiencies in the design of the net are not those that an ordinary consumer “would reasonable anticipate.”¹⁹¹

Causation can be established through the general circumstances of the accident and Plaintiffs’ expert testimony. The net was, according to Clark, insufficiently stabilized or durable to withstand normal use conditions. These deficiencies weakened the net such that the baseball that struck Twigg was able to penetrate the net.

Finally, certain facts suggest that the defect existed at the time of its manufacture and subsequent distribution by Defendants. Garware tested samples from the relevant production lots and delivered the nets to BSN, which stored them

¹⁸⁹ *Campbell v. Gen. Motors Corp.*, 32 Cal. 3d 112, 184 Cal. Rptr. 891, 649 P.2d 224 (Cal. 1982).

¹⁹⁰ *Kurzinsky v. Petzel Am., Inc.*, No. 17-1234, 2019 WL 220201, 2019 U.S. Dist. LEXIS 7561, at *16 (E.D. Pa. Jan. 16, 2019). To emphasize this point, I contrast the circumstances of this accident, where Twigg sat behind the safety net, to a hypothetical scenario where Twigg had been standing behind the non-protected portion of the L-Screen. If he had done so, the danger of being struck would clearly be understood by an ordinary consumer.

¹⁹¹ *Id.*

until it received an order from a customer.¹⁹² Storage under these conditions would not contribute to the net's deterioration. While some defects may immediately reveal their presence, the deterioration in this case, as described by Clark, was a gradual process. Finally, a juror accepting Plaintiffs' factual narrative could draw the reasonable conclusion that the net must have been defective as the High School's use and storage of the net would not accelerate its deterioration under the conditions identified by Clark. Defendants' Motions for Summary Judgment are therefore denied as to Count I.

But “[i]n Pennsylvania, evidence of misuse is generally admissible to defeat causation in a strict products liability design defect case.”¹⁹³ “Misuse involves a plaintiff's ‘unforeseeable, outrageous, and extraordinary use of a product.’”¹⁹⁴ There is testimony that would suggest the safety net was visibly damaged and had been repaired in several places with zip-ties on the day of the accident. If jurors credited this testimony, it would be reasonable for them to conclude that the High School's significant overuse of the net rendered the product unsafe, a development that bars granting summary judgment in Plaintiffs' favor on this issue.

¹⁹² Doc. 88, Ex. R at 83:13-15.

¹⁹³ *Wright v. Ryobi Techs., Inc.*, 175 F. Supp. 3d 439, 448 (citing *Moyer v. United Dominion Indus., Inc.*, 473 F.3d 532, 542 (3d Cir. 2007)).

¹⁹⁴ *Id.* (quoting *Nathan v. Techtronic Indus. N. Am., Inc.*, 92 F. Supp. 3d 264, 275 (M.D. Pa. 2015)).

ii. The Risk Utility Standard

The risk utility standard “states that a product is in a defective condition if a ‘reasonable person’ would conclude that the probability and seriousness of harm caused by the product outweigh the burden or costs of taking precautions.”¹⁹⁵ The Pennsylvania Supreme Court has identified a nonexclusive list of risk-utility factors: “the gravity of the danger posed by the challenged design, the likelihood that such danger would occur, the mechanical feasibility of a safer alternative design, the financial cost of an improved design, and the adverse consequences to the product and to the consumer that would result from an alternative design.”¹⁹⁶ The Pennsylvania Supreme Court has further clarified that under the risk-utility test “the focus of a design defect case must be limited to the characteristics of the product, and not the conduct of the manufacturer or seller.”¹⁹⁷

Neither Defendant moved for summary judgment as to this theory of design defect liability, as opposed to summary judgment on the design defect claim as a whole. Consequently, I do not perform a substantial analysis of Plaintiffs’ ability to assert a design defect claim under the risk-utility test, but I do note that the limitations the Court has imposed on Plaintiffs’ proposed expert testimony,

¹⁹⁵ *Tichner*, 104 A.3d at 389.

¹⁹⁶ *Sullivan*, 306 A.3d at 861 (quoting *Barker v. Lull Engineering Co.*, 20 Cal. 3d 413, 143 Cal. Rptr. 225, 573 P.2d 443 (Cal. 1978)).

¹⁹⁷ *Id.*

particularly Clark’s ability to speak to the design of L-Screens, would significantly hamper their ability to satisfactorily demonstrate several of these factors.

b. Manufacturing Defect Claim

“A manufacturing defect is a deviation from a product’s intended design.”¹⁹⁸ Accordingly, “a ‘manufacturing or production defect is readily identifiable because a defective product is one that differs from the manufacturer’s intended result or from other ostensibly identical units of the same product line.’”¹⁹⁹ Plaintiffs may proceed by using either “direct or circumstantial evidence.”²⁰⁰ “Direct evidence requires evidence of ‘a breakdown in the machine or component thereof’; and circumstantial evidence requires plaintiff [to] rule out abnormal uses or secondary causes of a malfunction—also known as the ‘malfunction theory.’”²⁰¹

Like the design defect claim, I decline to grant any motion for summary judgment regarding this theory of liability. A juror could reasonably discard Stephen Pfriem’s opinions regarding the inadequacy of the product’s testing and the development of product specifications. To do so, the juror would credit the statements describing simulated hazard testing performed by BSN, suggesting that

¹⁹⁸ *Chandler v. L’Oreal USA, Inc.*, 774 F. App’x 75, 754 (3d Cir. 2019).

¹⁹⁹ *Terrell v. Davol, Inc.*, Civ. A. No. 13-5074, 2014 U.S. Dist. LEXIS 103695, 2014 WL 3746532, at *7 (E.D. Pa. July 30, 2014) (quoting *Lucas v. City of Visalia*, 726 F. Supp. 2d 1149, 1154 (E.D. Cal. 2010)).

²⁰⁰ *Muniz v. Stober*, Civ. A. No. 18-4619, 2019 U.S. Dist. LEXIS 130926, at *6 (E.D. Pa. Aug. 5, 2019) (citing *Smith v. Howmedica Osteonics Corp.*, 251 F. Supp. 3d 844, 851 (E.D. Pa. 2017)).

²⁰¹ *Id.* (quoting *Smith*, 251 F. Supp. 3d at 851).

the performance specifications were sufficient. Accordingly, the issue with the safety net in this case would not arise from its design.

Instead, the reasonable inference would be that this specific net had a defect that caused it to unexpectedly deteriorate. Based on Clark's testimony, the net displayed oxidative degradation in 2021 and it did not meet the relevant mechanical specifications in 2023. At the time of the accident and the time of the FTIR testing, the net was well-within the sole estimation of the product's service life. Although the mechanical testing was performed outside of the expected lifetime of the safety net, its removal from service means it would not have been further exposed to conditions or use that would contribute to additional degradation. If a juror credited Plaintiffs' factual narrative to conclude the net had undergone only moderate, indoor use and it did not display any visible signs of damage at the time of the accident, the juror could then infer, as Clark opines, that the net was manufactured to be either insufficiently durable or stabilized.

The causation and the existence of the defect inquiries remain unchanged from the analysis conducted above. Consequently, I deny Defendants' Motions for Summary Judgment as they pertain to Plaintiffs' manufacturing defect claim. But again, the factual circumstances that suggest substantial overuse of the net requires the Court to also deny Plaintiffs' Motion for Summary Judgment on this claim.

c. Failure to Warn Claim

A “plaintiff raising a [strict liability failure to warn] claim must establish only two things: that the product was sold in a defective condition ‘unreasonably dangerous’ to the user, and that the defect caused plaintiff’s injury. To establish that the product was defective, the plaintiff must show that a warning of a particular product was either inadequate or altogether lacking, and that this deficiency in warning made the product ‘unreasonably dangerous.’”²⁰² To establish causation, “the plaintiff must demonstrate that the user of the product would have avoided the risk had he or she been warned of it by the seller.”²⁰³ But “if the record shows that the plaintiff was ‘fully aware of the risk posed by the product,’ such evidence will defeat a failure to warn strict liability claim.”²⁰⁴

Sufficient factual disputes require the Court to deny all motions as to this claim. The uncontested record indicates that the safety net arrived without any warnings. Here, the Twiggs can demonstrate that this lack of warning made the safety net “unreasonably dangerous” by relying on Clark’s hazard analysis testimony and aspects of the record that suggest the net had not been misused. This would allow

²⁰² *Phillips v. A Best Prods. Co.*, 665 A.2d 1167, 1171 (Pa. 1995).

²⁰³ *Phillips*, 664 A.2d at 1171.

²⁰⁴ *Shujauddin v. Berger Bldg. Prods.*, No. 19-0876, 2023 WL 2989952, 2023 U.S. Dist. LEXIS 67312, at *26 (E.D. Pa. Apr. 18, 2023) (quoting *Zuzel v. Cardinal Health, Inc.*, 565 F. Supp. 3d 623, 639 (E.D. Pa. 2021)).

a juror to conclude that the product lacked warnings regarding its premature deterioration.

Under Pennsylvania law, “the heeding presumption relieves a plaintiff opposing summary judgment of his obligation to produce evidence to show that the user of the product would have avoided the risk had he been warned of it and shifts the burden of production to the defendant to rebut the presumption.”²⁰⁵ Defendants contend this presumption is only applicable in certain toxic tort cases. The caselaw is somewhat divided on this issue, but federal courts in this Circuit have consistently applied the heeding presumption outside the toxic tort context.²⁰⁶ Accordingly, I will similarly apply the presumption in this case. Without any evidence to rebut this presumption, I decline to grant Defendants’ motions for summary judgment on this claim.

But there are sufficient factual issues such that Plaintiffs’ motion must similarly be denied. Although it is uncontested that the net did not include any warnings, there is sufficient evidence that significant misuse of the net interrupted the chain of causation.

²⁰⁵ *Nelson v. Am. Honda Motor Co.*, No. 1:18-cv-000210, 2021 U.S. Dist. LEXIS 93503, at *18 (W.D. Pa. May 17, 2021) (Lanzillo, M.J.) (citing *Colegrove v. Cameron Mach. Co.*, 172 F. Supp. 2d 611, 617 (W.D. Pa. 2001)).

²⁰⁶ *E.g.*, *Nelson v. Am. Honda Motor Co.*, No. 1:18-cv-000210, 2021 WL 2877919, 2021 U.S. Dist. LEXIS 93503, at *18-19 (W.D. Pa. May 17, 2021) (Lanzillo, M.J.), adopted by *Nelson v. Am. Honda Motor Co.*, 1:18-cv-210, 2021 WL 2646840, 2021 U.S. Dist. LEXIS 119685 (W.D. Pa. June 28, 2021) (collecting cases).

2. Negligence Claim

Although Plaintiffs failed to respond to Defendants arguments regarding their negligence claim, I decline to deem this claim abandoned. Given the lack of analysis by Plaintiffs, I note that the three theories of their strict liability claims could also be imported into a negligence claim;²⁰⁷ as Defendants only moved for summary judgment on the claim as a whole, I end my analysis after evaluating a negligent design claim. But I offer several short observations on the viability of negligent manufacturing or negligent failure to warn claim.

a. Negligent Design

“To prevail on a negligent design claim, a plaintiff ‘must show that the defendant had a duty to conform to a certain standard of conduct, that the defendant breached that duty, that such breach caused the injury in question, and actual loss or damage.’”²⁰⁸ “Specifically, the plaintiff must show that the defendant ‘failed to exercise reasonable care in the adoption of a safe design.’”²⁰⁹

“To determine whether the defendant owed a duty of care for a negligent design claim, courts weigh the following factors: ‘(1) the relationship between the parties; (2) the social utility of the [defendant’s] conduct; (3) the nature of the risk

²⁰⁷ Although the “Pennsylvania Supreme Court has suggested that there is less of a distinction between the treatment of claims asserting negligent manufacturing, design and failure to warn,” it is still “useful” to separate these claims out to the degree they are governed by different portions of the Restatement (Second) of Torts. *Smith*, 251 F. Supp. 3d at 852.

²⁰⁸ *Shujaddin*, 2023 U.S. Dist. LEXIS 96999, at *15 (E.D. Pa. June 5, 2023) (quoting *Berrier v. Simplicity Mfg., Inc.*, 563 F.3d 38, 61 (3d Cir. 2009)).

²⁰⁹ *Id.* (quoting *McGrain v. C.R. Bard, Inc.*, 551 F. Supp. 3d 529, 541 (E.D. Pa. 2021)).

imposed and foreseeability of the harm incurred; (4) the consequences of imposing a duty upon the [defendant]; and (5) the overall public interest in the proposed solution.”²¹⁰

Under these factors, it is evident that Defendants owed a duty of care in this case. Garware and BSN jointly developed the performance specifications for the net and both allegedly tested the net’s mechanical qualities. As such, both owed a duty of care to Twigg, a foreseeable end user of this product. Further, the accident in this case was caused by the very risk the L-Screen is designed to protect against. The social utility in Defendants’ conduct appears to be low, as it is alleged they under-designed the safety net, and imposing a duty upon Defendants would seemingly only require additional testing in the design process.

The remaining elements of a negligent design claim are similarly met. Plaintiffs have identified sufficient facts to suggest that Defendants breached their duty by insufficiently testing the design of the net. The breach then caused the injury in question as, under Plaintiffs’ factual narrative, the safety net degraded within its established service life, thereby allowing the baseball to penetrate the net. Finally, of course, Twigg suffered grievous harm.

Although Plaintiffs did not move for summary judgment on this claim, I simply note the facts suggesting overuse of the net would again interrupt causation

²¹⁰ *Shujaddin*, 2023 U.S. Dist. LEXIS 96999, at *15 (quoting *Althaus ex rel. Althaus v. Cohen*, 756 A.2d 1166, 1169 (Pa. 2000)).

such that the Court could not grant any such motion. Although there appear to be no issues as to a negligent manufacturing defect claim, Pennsylvania courts have declined to extend the heeding presumption to negligent failure to warn claims.²¹¹ Therefore, Plaintiffs would have to introduce evidence to demonstrate that the injury would have been avoided had he read a proper warning. From the Court's review of the record, it is questionable that the Twiggs could meet that burden.

3. The Remaining Counts

Finally, I address Defendants' arguments concerning the two remaining counts: a claim for loss of consortium and a claim for punitive damages. A loss of consortium claim "is a derivative claim, which hinges on the success of the underlying claim of the spouse."²¹² As I have denied Defendants' Motions for Summary Judgment as to Twigg's strict liability and negligence claims, it is therefore appropriate to allow Lori Twigg to maintain her loss of consortium claim.

As to the punitive damages claim, I note that punitive damages are not an independent cause of action. But I conclude that Plaintiffs have established a sufficient record that a reasonable juror could impose punitive damages. Disputed

²¹¹ *E.g.*, *Berry v. Wyeth*, 2005 WL 1431742, 2005 Phila. Ct. Com. Pl. LEXIS 271, at *22 (Phila. Ct. Common Pleas 2005) ("...in Pennsylvania, a heeding presumption has been applied only in strict liability actions. Pennsylvania has never applied the heeding presumption to a negligence case"); *Lineberger v. Wyeth*, 72 Pa. D. &C. 4th 35 (Phila. Ct. Common Pleas 2005); *In re BioZorb Device Prods. Liab. Litig.*, No. 1:22-cv-11895, 2025 WL 27628, 2025 U.S. Dist. LEXIS 1163 (D. Mass. Jan. 3, 2025) (applying Pennsylvania law).

²¹² *Balletta v. Spadoni*, 47 A.3d 183, 201 (Pa. Commw. 2012).

facts in this case demonstrate that Defendants under-designed a key safety product by failing to adequately test the net; based on the record before the Court, a reasonable juror could conclude that Defendants acted recklessly in the manner in which they discussed the design specifications of the net and tested the product.

III. CONCLUSION

Defendants' Rule 702 challenges to Dale Clark are partially granted, but Stephen Pfriem's testimony is fully permitted. Given the significant factual disputes that exist, in part due to Plaintiffs' expert testimony, the Court must deny all Motions for Summary Judgment in this case.

An appropriate Order follows.

BY THE COURT:

s/ Matthew W. Brann

Matthew W. Brann

Chief United States District Judge