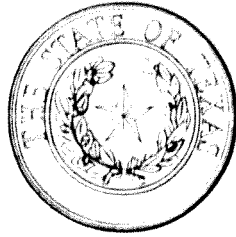


REVERSE and RENDER and Opinion Filed August 26, 2010



In The
Court of Appeals
Fifth District of Texas at Dallas

No. 05-08-01390-CV

GEORGIA-PACIFIC CORPORATION, Appellant

v.

**SUSAN ELAINE BOSTIC, INDIVIDUALLY AND
AS PERSONAL REPRESENTATIVE OF THE HEIRS AND ESTATE OF
TIMOTHY SHAWN BOSTIC, DECEASED; HELEN DONNAHOE;
AND KYLE ANTHONY BOSTIC, Appellees**

**On Appeal from the County Court at Law No. 1
Dallas County, Texas
Trial Court Cause No. cc-03-01977-A**

OPINION

Before Justices Bridges, FitzGerald, and Fillmore
Opinion By Justice Fillmore

Appellant Georgia-Pacific Corporation appeals the final judgment of the trial court in favor of appellees Susan Elaine Bostic, Individually and as Personal Representative of the Heirs and Estate of Timothy Shawn Bostic, Deceased, Helen Donnahoe, and Kyle Anthony Bostic. In three issues, Georgia-Pacific contends (1) there is legally insufficient evidence that Georgia-Pacific's joint compound caused Timothy Bostic's mesothelioma, (2) there is no evidence to support the jury's finding of gross negligence against Georgia-Pacific, and (3) the trial court abused its discretion by denying Georgia-Pacific's motion for mistrial and by vacating the order granting Georgia-Pacific

a new trial.

Concluding there is legally insufficient evidence of causation, we reverse the trial court's judgment and render judgment that appellees take nothing on their claims against Georgia-Pacific.

PROCEDURAL BACKGROUND

In February 2003, Timothy Bostic's wife, son, father, and mother brought wrongful death claims and a survival action against Georgia-Pacific and numerous other entities alleging Timothy's death was caused by exposure to asbestos. At the time of trial, Georgia-Pacific was the sole remaining defendant, the other named defendants having settled or been dismissed. Appellees alleged Georgia-Pacific was negligent, strictly liable for a product marketing defect, and grossly negligent.

In 2005, Judge Sally Montgomery presided over the trial of this lawsuit in Dallas County Court at Law No. 3. After the jury verdict awarding appellees actual and punitive damages, Judge Montgomery ordered appellees to either elect a new trial on all issues or agree to remit a misallocated award of future lost wages and the award of punitive damages. Appellees elected a new trial. The lawsuit was tried for the second time before a jury in 2006.¹ The jury returned a verdict in favor of appellees, finding Georgia-Pacific seventy-five percent liable and Knox Glass, Inc., a non-party former employer of Timothy, twenty-five percent liable for Timothy's death. The jury awarded \$7,554,907 in compensatory damages and \$6,038,910 in punitive damages.

Georgia-Pacific filed a motion to recuse Judge Montgomery. Judge M. Kent Sims granted the motion to recuse, and the lawsuit was transferred to Judge Russell H. Roden, Dallas County Court at Law No. 1. In December 2006, the trial court granted Georgia-Pacific's motion for mistrial and ordered a new trial.

¹ Harold Bostic, Timothy's father, died while the case was being retried.

In January 2007, Judge D'Metria Benson became the presiding judge of Dallas County Court at Law No. 1. In February 2008, appellees filed a motion to vacate Judge Roden's order granting a new trial and for entry of judgment. In July 2008, Judge Benson granted appellees' motion to vacate the order for new trial and signed a judgment based on the jury's June 2006 verdict. In October 2008, Judge Benson signed the amended final judgment awarding appellees \$6,784,135.32 in compensatory damages and \$4,831,128.00 in punitive damages. Georgia-Pacific appealed.

LEGAL SUFFICIENCY OF THE EVIDENCE

In its first issue, Georgia-Pacific asserts there is legally insufficient evidence that Georgia-Pacific asbestos-containing joint compound² caused Timothy's mesothelioma, a form of cancer usually linked to asbestos exposure. Georgia-Pacific asserts there is no evidence Timothy was exposed to Georgia-Pacific asbestos-containing joint compound, and even if there was evidence of exposure, there is no evidence of dose. Further, Georgia-Pacific asserts that even if there was evidence of exposure and dose, the record contains no epidemiological studies showing that persons similar to Timothy with exposure to asbestos-containing joint compound had an increased risk of developing mesothelioma. Georgia-Pacific also asserts that appellees' experts' theory that "each and every exposure" to asbestos caused Timothy's mesothelioma was rejected by the Texas Supreme Court in *Borg-Warner Corp. v. Flores*, 232 S.W.3d 765 (Tex. 2007).³ Georgia-Pacific asserts that for each of these reasons, appellees' negligence and defective marketing claims against Georgia-

² Joint compound, sometimes called "drywall mud," is used to connect and smooth the seams of adjoining pieces of drywall, also called sheetrock, and to cover nail heads on sheets of drywall. Joint compound is spread in a thin coat and then smoothed. After it dries, uneven areas are further smoothed by sanding. This process is sometimes carried out multiple times in further refining the surface.

³ Prior to the 2008 final judgment in this case, the Texas Supreme Court issued its *Flores* opinion on toxic tort law in asbestos cases, including specific causation. Like the instant appeal, in *Georgia Pacific Corp. v. Stephens*, 239 S.W.3d 304 (Tex. App. Houston [1st Dist.] 2007, pet. denied), issued after *Flores*, the asbestos trial occurred before the *Flores* decision, but the appellate court was bound by *Flores*. *Stephens*, 239 S.W.3d at 321. *see also Smith v. Kelly-Moore Paint Co.*, 307 S.W.3d 829, 834 (Tex. App. Fort Worth 2010, no pet.) (appellate court bound by *Flores* as supreme court precedent); *Lubbock Cnty v. Trammel's Lubbock Bail Bonds*, 80 S.W.3d 580-585 (Tex. 2002) (once supreme court announces proposition of law, that proposition is binding precedent and may not be modified or abrogated by court of appeals).

Pacific fail as a matter of law.

When, as here, an appellant attacks the legal sufficiency of an adverse finding on an issue on which it did not have the burden of proof, it must demonstrate that no evidence supports the finding. *Croucher v. Croucher*, 660 S.W.2d 55, 58 (Tex. 1983). “The final test for legal sufficiency must always be whether the evidence at trial would enable reasonable and fair-minded people to reach the verdict under review.” *Del Lago Partners, Inc. v. Smith*, 307 S.W.3d 762, 770 (Tex. 2010) (quoting *City of Keller v. Wilson*, 168 S.W.3d 802, 827 (Tex. 2005)). We review the evidence in the light most favorable to the verdict, crediting favorable evidence if reasonable jurors could and disregarding contrary evidence unless reasonable jurors could not. *Del Lago Partners*, 307 S.W.3d at 770.

Asbestos Exposure

In 2002, Timothy was diagnosed with mesothelioma at the age of forty. He died in 2003. Appellees claim Timothy’s mesothelioma was caused by his exposure to asbestos-containing joint compound manufactured by Georgia-Pacific. Georgia-Pacific acknowledged there is some evidence that Timothy used or was present during the use of joint compound between 1967 and 1977, but contends there is no evidence of exposure to Georgia-Pacific asbestos-containing joint compound. *See Gaullding v. Celotex Corp.*, 772 S.W.2d 66, 68 (Tex. 1989) (fundamental principle of products liability law is plaintiff must prove defendant supplied product which caused injury).

Georgia-Pacific manufactured and sold joint compound products that included chrysotile asbestos⁴ fibers from the time it acquired Bestwall Gypsum Company in 1965 until 1977, when

⁴ Chrysotile is the most abundant type of asbestos fiber and is a serpentine fiber consisting of “pliable curly fibrils which resemble scrolled tubes.” *Flores*, 232 S.W.3d at 766 n.4 (citing Lee S. Siegel, Note, *As the Asbestos Crumbles: A Look at New Evidentiary Issues in Asbestos Related Property Damage Litigation*, 20 HOUSTON L. REV. 1139, 1149 (1992)); *Smith*, 307 S.W.3d at 832 n.3. The remaining commercial types of asbestos fibers are amphiboles, which include amosite and crocidolite. *Smith*, 307 S.W.3d at 832, 837; *Bartel v. John Crane, Inc.*, 316 F. Supp.2d 603, 606 (N.D. Ohio 2004); *aff’d*, 424 F.3d 488 (6th Cir. 2005).

Georgia-Pacific ceased marketing asbestos-containing joint compound. Those Georgia-Pacific joint compounds were offered in a dry mix formula and a pre-mixed formula.⁵ The parties do not dispute that any exposure of Timothy to a Georgia-Pacific asbestos-containing joint compound would have occurred between 1967 and 1977. Evidence regarding Timothy's work with or around Georgia-Pacific asbestos-containing joint compound in this ten-year period came from Timothy's and Harold Bostic's deposition testimony read and played by videotape at trial and Timothy's work history sheets.

Timothy testified he had been around drywall work his entire life, and he recalled that before the age of ten, he observed his father performing drywall work. He stated he mixed and sanded joint compound from the age of five. He testified he recalled at a young age helping his father "mud the holes" with joint compound. While he did not provide any more specifics of drywall work he performed with his father before 1977, he believed he used and was exposed to Georgia-Pacific joint compound before he graduated from high school in 1980. Timothy's work history sheets also indicate he worked with and around other brands of asbestos-containing joint compounds.

Timothy's work history sheets also assert exposure to asbestos fibers from Georgia-Pacific joint compound as a result of household exposure to Harold's clothing. This alleged exposure would have occurred prior to his parents' divorce in 1972, when he was ten years old, and thereafter when he stayed with his father on weekends, holidays, and at times in the summer.

Harold testified he used Georgia-Pacific joint compound ninety-eight percent of the time that he did drywall work. He testified he tried one or two other brands of joint compound, but he always returned to Georgia-Pacific's product. With one exception listed below, Harold said he could not positively associate Georgia-Pacific's product with any specific drywall job. He stated he knew he

⁵ Dust containing asbestos fibers could be released by sanding or sweeping either formula and by mixing the dry formula

had used Georgia-Pacific's product on several jobs, but he could not recall exactly where. Harold testified that Timothy began to accompany him on remodeling jobs in 1967 when Timothy was the age of five. Timothy helped mix joint compound, applied and sanded joint compound to the height Timothy could reach, and breathed in the dust from sanded joint compound.

According to his testimony, Harold worked part-time on only one remodeling or construction job at a time for a family member or friend. Each project took a lengthy period of time to complete. Although he testified there was no doubt in his mind that he and Timothy used Georgia-Pacific joint compound "many, many times" between 1967 and 1977, he identified and described work performed on eight remodeling projects for the relevant period. Harold identified only one specific project where Georgia-Pacific joint compound was used, and he could not recall whether Timothy performed drywall work or was present during drywall work on that project. Only three projects were identified in which Harold and Timothy may have performed drywall work together or Timothy may have been present when Harold performed drywall work. Following is a summary chronology of the remodeling or construction jobs Harold recalled for this relevant period:

- In the house he lived in with his wife and Timothy, Harold performed drywall work while remodeling a utility room. Timothy was four or five years of age at the time and may have played in the joint compound "mud" or sanded drywall to the height he could reach.
- During the course of a three-month project, Harold built a ten foot by ten foot bathroom and dressing room in his brother's house. Harold performed drywall work as part of the project. He could not recall the brand of joint compound he utilized. Timothy performed sewer work on this project. Timothy was six or seven years of age.
- Harold remodeled the interior of his sister's service station. The project lasted a year in 1968 or 1970. Harold performed drywall work on an eight foot by seven foot room and the ceiling of the room. Timothy was between the ages of six and eight.
- Harold built living quarters in a friend's garage and car dealership. This year-long project included drywall work. He has no memory of Timothy working with drywall on this project.
- In connection with the construction of the interior of a friend's prefabricated home, Harold performed drywall work. The construction project took a year to complete. Harold recalled

utilizing Georgia-Pacific joint compound, but he did not recall whether Timothy performed drywall work or whether Timothy was present when Harold performed drywall work. Timothy dug the septic tank on this project. Timothy was between the ages of ten and twelve.

- In finishing a room in his sister's newer home, Harold could not recall utilizing drywall. Timothy was eleven or twelve years of age.
- During a year-long construction project, Harold performed drywall work in his sister's five hundred square foot older home.
- In building partitions in his mother's home, Harold recalled that he may have patched some cracks, but he did not perform drywall work and he could not recall using joint compound. Timothy was thirteen or fourteen years of age.

Evidence at trial substantiated Timothy was exposed to asbestos other than through use of or presence during the use of Georgia-Pacific asbestos-containing joint compound. In addition to Georgia-Pacific joint compound, the evidence established and appellees acknowledge that Timothy was exposed to numerous asbestos products and asbestos-containing products, both occupationally and through household and bystander exposure.

Timothy was exposed to asbestos utilized at Knox Glass. Harold was employed as a welder at Knox Glass from around 1960 until the plant closed in 1984. Asbestos and asbestos-containing products were used throughout the glass container factory, particularly to insulate against heat. Harold was exposed to asbestos fibers, which were inadvertently brought home on his clothing, thereby exposing Timothy. These household exposures to asbestos occurred consistently from Timothy's birth until his parents were divorced when he was ten years old, from time spent with Harold on weekends, holidays, and in the summers between the ages of ten and fifteen, and from the ages of fifteen to eighteen when Timothy lived with Harold.

Timothy was further exposed to asbestos utilized at Knox Glass in connection with his janitorial and mechanical work at Knox Glass in the summer months of 1980 through 1982.⁶ He worked in both the hot end of the plant, where glass bottles were manufactured and where asbestos was more likely prevalent, and in the cold end of the plant.⁷ The evidence indicated that asbestos or asbestos-containing items in the work environment at Knox Glass included refractory cements, fireproofing, asbestos cloth, pumps, packing (braided rope made from asbestos), valves, furnaces, blow heads, gaskets, and firebrick mortar. Timothy's work responsibilities included cutting raw asbestos cloth, sweeping up asbestos-containing dust, cleaning up after asbestos pipe coverings were repaired, removing flaking asbestos from machines and replacing it with asbestos he cut, and wearing asbestos gloves or mittens.

Timothy also had occupational exposure to asbestos during 1977 and 1978, when he worked for approximately six months as a welder's assistant for Palestine Contractors. There he was exposed to asbestos while removing gaskets and asbestos pipe insulation three to four times each week.

Timothy was also exposed to asbestos fibers as a result of mechanical work Harold performed on automobiles, including brake work. Timothy was exposed in the household to asbestos fibers on Harold's clothing and as a bystander and assistant to his father with respect to the automotive repairs. In addition, when he was older, Timothy performed mechanical work on vehicles resulting in exposure to a number of asbestos-containing products, including clutches, brake pads and linings, friction products, and gaskets. He testified that he performed approximately four

⁶ In 1988, Timothy and Harold underwent testing to determine whether they had contracted an asbestos-related disease as a result of working at Knox Glass. A bronchial alveolar lavage (BAL) was performed on each of them to determine what type of fiber exposures had occurred. Two chrysotile and two amosite asbestos fibers were found in Timothy's BAL. There were additional fibers that were not asbestos that could not be identified. Three amosite asbestos fibers were found in Harold Bostic's BAL.

⁷ Timothy testified he worked summer months at Knox Glass in 1980, 1981, and 1982. Appellees seek to narrow the time period of exposure to asbestos and asbestos-containing products to three months by asserting that to be the cumulative amount of time Timothy worked in the hot end of the plant.

brake jobs a year and fewer than ten clutch jobs in his lifetime. Timothy identified a number of manufacturers of asbestos-containing products he was exposed to in connection with the mechanical work he performed.

After his graduation from high school, Timothy began remodeling homes on his own. According to the evidence, he was exposed to a number of asbestos-containing products in his remodeling work, including roofing shingles, floor tiles, and ceiling tiles. Timothy identified several manufacturers and marketers of asbestos-containing products he utilized in addition to Georgia-Pacific joint compounds. It is not disputed that Timothy used Georgia-Pacific products after his graduation from high school in 1980. However, these uses occurred after Georgia-Pacific joint compounds no longer contained asbestos.

Albeit limited, the record contains evidence through the lay testimony of Timothy and Harold, and Timothy's work history sheets, of Timothy's use or presence during the use of Georgia-Pacific's asbestos-containing joint compound. On this record, we disagree with Georgia-Pacific's argument that there is no evidence Timothy was exposed to Georgia-Pacific asbestos-containing joint compound.

Substantial-Factor Causation

Georgia-Pacific next contends there is legally insufficient evidence of causation, an essential element of appellees' negligence and strict liability defective marketing claims. In a toxic tort case, the plaintiff must show both general and specific causation. *See Merrell Dow Pharm., Inc. v. Havner*, 953 S.W.2d 706, 714–15, 720 (Tex. 1997). “General causation is whether a substance is capable of causing a particular injury or condition in the general population, while specific causation is whether a substance caused a particular individual's injury.” *Havner*, 953 S.W.2d at 714; *see also Georgia-Pacific Corp. v. Stephens*, 239 S.W.3d 304, 308–09 (Tex. App. -Houston [1st Dist.] 2007,

pet. denied). For purposes of this appeal, Georgia-Pacific is not challenging the legal sufficiency of the evidence of general causation that inhalation of chrysotile asbestos fibers can cause mesothelioma. Instead, Georgia-Pacific challenges the legal sufficiency of the evidence as to specific causation, that is whether Georgia-Pacific asbestos-containing joint compound was, in fact, a cause of Timothy's mesothelioma.

Causation

Georgia-Pacific contends that appellees failed to introduce evidence sufficient to satisfy the "substantial factor" standard of causation set forth in *Flores*, because appellees produced no evidence of cause-in-fact. In the context of an asbestos case, the Texas Supreme Court explained that "asbestos in the defendant's product [must be] a substantial factor in bringing about the plaintiff's injuries." *Flores*, 232 S.W.3d at 770. The *Flores* court agreed that the "frequency, regularity, and proximity" test for exposure to asbestos set out in *Lohrmann v. Pittsburgh Corning Corp.*, 782 F.2d 1156 (4th Cir.1986), is appropriate. *Flores*, 232 S.W.3d at 769; *see also Lohrmann*, 782 F.2d at 1162-63 (to support reasonable inference of substantial causation from circumstantial evidence, there must be evidence of exposure to specific product on regular basis over extended period of time in proximity to where plaintiff actually worked). The supreme court stated, however, that the terms "frequency," "regularity," and "proximity" do not "capture the emphasis [Texas] jurisprudence has placed on causation as an essential predicate to liability," and agreed with *Lohrmann's* analysis that the asbestos exposure must be a substantial factor in causing the asbestos-related disease. *Flores*, 232 S.W.3d at 769; *see also Lohrmann*, 782 F.2d at 1162.

Causation is an essential element of appellees' claims for negligence and product marketing defect. Proximate cause is an element of a negligence claim, while producing cause is an element of a strict liability claim. *Gen. Motors Corp. v. Saenz*, 873 S.W.2d 353, 357 (Tex. 1993). "Both

producing and proximate cause contain the cause-in-fact element, which requires that the defendant's act be a "substantial factor in bringing about the injury and without which the harm would not have occurred." *Metro Allied Ins. Agency, Inc. v. Lin*, 304 S.W.3d 830, 835 (Tex. 2009) (quoting *Doe v. Boys Clubs of Greater Dallas, Inc.*, 907 S.W.2d 472, 481 (Tex. 1985)); *see also Flores*, 232 S.W.3d at 770 (quoting RESTATEMENT (SECOND) OF TORTS § 431 cmt. a (1965)) ("substantial" used to denote the fact that the defendant's conduct has such an effect in producing harm as to lead reasonable men to regard it as a cause); *Prudential Ins. Co. of Am. v. Jefferson Assocs., Ltd.*, 896 S.W.2d 156, 161 (Tex. 1995); *Patino v. Complete Tire, Inc.*, 158 S.W.3d 655, 661 (Tex. App. Dallas 2005, pet. denied).

Appellees assert that *Flores* does not require "but-for" causation in proving specific causation and that *Flores* requires only that appellees prove Timothy's exposure to Georgia-Pacific asbestos-containing joint compound was a "substantial factor" in contributing to his risk of mesothelioma. We disagree. The Texas Supreme Court "[has] recognized that '[c]ommon to both proximate and producing cause is causation in fact, including the requirement that the defendant's conduct or product be a substantial factor in bringing about the plaintiff's injuries.'" *Flores*, 232 S.W.3d at 770 (quoting *Union Pump Co. v. Allbritton*, 898 S.W.2d 773, 775 (Tex. 1995)); *see also Ford Motor Co. v. Ledesma*, 242 S.W.3d 32, 46 (Tex. 2007).

Thus, to establish substantial-factor causation, a plaintiff must prove that the defendant's conduct was a cause-in-fact of the harm. *See Flores*, 232 S.W.3d at 770. "In asbestos cases, then, we must determine whether the asbestos in the defendant's product was a substantial factor in bringing about the plaintiff's injuries" and without which the injuries would not have occurred. *Id.*; *see also Stephens*, 239 S.W.3d at 308-09.

Appellees acknowledged in their brief and at oral submission that their only expert who opined on specific causation of Timothy's mesothelioma was pathologist Samuel Hammar, M.D. However, Dr. Hammar testified he could not opine that Timothy would not have developed mesothelioma absent exposure to Georgia-Pacific asbestos-containing joint compound. Because a plaintiff must prove that the defendant's conduct was a cause-in-fact of the harm, appellees' evidence is insufficient to satisfy the required substantial-factor causation element for maintaining this negligence and product liability suit. *See Flores*, 232 S.W.3d at 770.

"Each and Every Exposure" Theory of Causation

Georgia-Pacific argues that appellees further failed to establish substantial-factor causation because they improperly based their showing of causation on the opinion of their only specific causation expert that each and every exposure to asbestos caused or contributed to cause Timothy's mesothelioma. Georgia-Pacific contends the law set forth in *Flores* and *Stephens* rejects the theory that each and every exposure to asbestos contributes to the development of mesothelioma. *See Flores*, 232 S.W.3d at 773; *Stephens*, 239 S.W.3d at 311, 314–15, 321 (in *Flores*, Texas Supreme Court rejected "any exposure" test for specific causation and adopted substantial-factor causation standard). Therefore, Georgia-Pacific asserts there is no evidence of the essential element of causation to support appellees' negligence or defective marketing claims against Georgia-Pacific.

Quoting from the underlying court of appeals decision, the *Flores* court expressly rejected the "each and every exposure" theory of liability:

[Plaintiff's expert] acknowledged that asbestos is "plentiful" in the ambient air and that "everyone" is exposed to it. If a single fiber could cause asbestosis, however, "everyone" would be susceptible. No one suggests this is the case. . . . In analyzing the legal sufficiency of Flores's negligence claim, then, the court of appeals erred in holding that "[i]n the context of asbestos-related claims, if there is sufficient evidence that the defendant supplied *any* of the asbestos to which a plaintiff was exposed, then the plaintiff has met the burden of proof."

Flores, 232 S.W.3d at 773 (emphasis in original). Instead, as discussed previously in this opinion, the Texas Supreme Court requires the plaintiff to prove “that the defendant’s product was a substantial factor in causing the alleged harm.” *Id.*

In *Stephens*, Dr. Hammar, appellees’ specific causation expert here, “express[ed] an opinion that each and every exposure that an individual has in a bystander occupational setting causes their mesothelioma.” *Stephens*, 239 S.W.3d at 315. Dr. Hammar testified that any exposure the deceased commercial painter had throughout the time he worked was causative of his mesothelioma. *Id.* at 320. The plaintiffs in *Stephens* also relied on the testimony of Jerry Lauderdale, an industrial hygienist. *Id.* at 314. Lauderdale testified that asbestos-related diseases are based on cumulative exposures and that there is no way to isolate a particular exposure that caused development of the disease. *Id.* at 315. It was Lauderdale’s opinion “that every exposure does contribute to the development of—potential to develop mesothelioma.” *Id.* The court noted that the experts failed to show that “the ‘any exposure’ theory is generally accepted in the scientific community— that any exposure to a product that contains asbestos results in a statistically significant increase in the risk of developing mesothelioma.” *Id.* at 320–21. Consistent with *Flores*, the “each and every exposure” theory was rejected in *Stephens*. *Id.* at 314–15, 320–21.

In this case, appellees’ specific causation expert, Dr. Hammar, testified that asbestos-related diseases are dose-related diseases, meaning that asbestos exposures comprising the cumulative dose, at least to the point of the first cancer cell’s development, are all causative or potentially causative of the disease. He opined, to a reasonable degree of medical probability, that each and every exposure to asbestos would be a significant contributing, or at least a potentially contributing, factor to the development of mesothelioma. Dr. Hammar agreed that each and every exposure Timothy had to asbestos was significant and a contributing factor in the development of his mesothelioma.

These exposures would include Timothy's use of or exposure to asbestos during his employment at Knox Glass, his bystander exposure, and his household exposure to asbestos fibers Harold inadvertently brought home on his clothing from Knox Glass and from his part-time mechanical and construction work.

At oral submission, appellees stated that while not experts on the specific cause of Timothy's disease, their other experts at trial supported Dr. Hammar's testimony. Appellees' experts at trial on general causation, Arnold R. Brody, Ph.D., an experimental pathologist with a doctorate in cell biology, and Richard Lemen, Ph.D., an epidemiologist, espoused the "each and every exposure" theory. Dr. Brody testified that each and every asbestos fiber a person inhales is considered a cause of or a substantial contributing factor to mesothelioma. Dr. Lemen testified that with each and every exposure to asbestos, and each and every inhalation of asbestos fibers, the fibers add to the total body burden of exposure and contribute to the development of mesothelioma.

In their effort to demonstrate evidence of substantial-factor causation, appellees also refer to the testimony of Richard Kronenberg, M.D., a witness called to testify by Georgia-Pacific. Dr. Kronenberg testified that asbestos diseases result from a total accumulated exposure over a lifetime. He stated that each and every exposure would be a significant contributing factor to an asbestos disease, and that all the exposures throughout Timothy's life working with any sort of asbestos-containing products contributed to the development of his disease.

The Texas Supreme Court has determined that an "each and every exposure" theory is legally insufficient to support a finding of causation. *Flores*, 232 S.W.3d at 773. We agree with Georgia-Pacific's assertion that appellees did not establish substantial-factor causation to the extent they improperly based their showing of specific causation on their expert's testimony and the testimony of Dr. Kronenberg that each and every exposure to asbestos caused or contributed to cause

Timothy's mesothelioma.

Frequency, Proximity, and Regularity of Exposure

Appellees contend that Georgia-Pacific misstates the facts in asserting the appellees' expert relied on the "each and every exposure" theory in support of substantial-factor causation. Instead, appellees assert that in accordance with the substantial-factor causation standard, they presented "substantial evidence of Timothy's ten years of frequent, proximate, and regular exposure to Georgia-Pacific asbestos joint compound. . . ."

Appellees contend that Timothy "used Georgia-Pacific asbestos joint compound 'many times' over ten years." Appellees assert that "[t]aking into account the frequency, proximity, and regularity of Timothy's exposure to Georgia-Pacific's joint compound," Dr. Hammar testified that Timothy's exposure to Georgia-Pacific asbestos joint compound would have been sufficient in and of itself to cause his mesothelioma.

It was Dr. Hammar's understanding that from an early age with his father, and then as he grew older, Timothy "did a fair amount of work with the drywall work" and he testified Timothy was exposed to asbestos during mixing, sanding, and cleaning up of drywall materials. Dr. Hammar testified he had reviewed Timothy's work history sheets "which chronicled Timothy's work history and what he had actually done during his life." But he acknowledged that work history sheets do not tell "the time of exposure and the intensity of the exposure the individual had." Further, he had not reviewed the deposition testimony of Timothy or Harold, although he acknowledged that deposition testimony provides more details of the nature and amount of exposure than work history sheets.

As is detailed above, the record does not contain "substantial" evidence of Timothy's frequent use of or exposure to Georgia-Pacific joint compound for the period 1967 to 1977 and does

not establish Timothy's use of the joint compound "many times" over that period.⁸ In fact, the evidence regarding Timothy's exposure to asbestos-containing joint compound and the number of times it occurred during the period 1967 to 1977 belies an assertion of exposure occurring "many times" and belies the information contained in Timothy's work history sheets reviewed by Dr. Hammar.⁹

We disagree with appellees' contention that Georgia-Pacific is incorrect in arguing appellees relied on the "each and every exposure" theory to support substantial-factor causation. We also disagree with appellees' contention that, instead, they presented "substantial evidence of Timothy's ten years of frequent, proximate, and regular exposure to Georgia-Pacific asbestos joint compound" to establish substantial-factor causation. *See Jackson v. Anchor Packing Co.*, 994 F.2d 1295, 1308 (8th Cir. 1993) (although worker testified he worked with gaskets and packets "many times" during years as mechanic, no evidence in record that he used gaskets many times and cannot tell whether he used products "for two jobs or two hundred jobs"); *Lohrmann*, 782 F.2d at 1163 (ten to fifteen occasions of exposure to asbestos-containing pipe covering lasting between one and eighteen hours duration insufficient to satisfy frequency-regularity-proximity test). On this record, there is insufficient evidence of Timothy's frequent and regular exposure to Georgia-Pacific's asbestos-containing joint compound during the relevant time period.

⁸ Appellees further assert that Timothy's exposure to Georgia-Pacific asbestos-containing joint compound "was far greater than any other asbestos exposure." This is apparently based on appellees "quantifying the ratio of [Timothy's] exposure to Georgia-Pacific asbestos joint compound as compared to his other exposures," which according to appellees was "ten years of Georgia-Pacific asbestos joint compound versus three months of exposure at Knox Glass [sic], six months at Palestine Contractors, potential household exposure, and sporadic brake work." Without endorsing this methodology, we conclude this argument is inapposite to the "frequency, proximity, and regularity" test associated with substantial-factor causation.

⁹ According to Timothy's work history sheets, for a period of over thirty years from the early 1970s, Timothy was exposed to asbestos fibers from Georgia-Pacific joint compounds through his work with or around them as a self-employed carpenter with a workweek of over forty hours, at various residences with Harold as a coworker, and through household exposure resulting from Harold's work as a carpenter.

Quantitative Evidence that Exposure Increased Risk of Developing Mesothelioma

Georgia-Pacific also contends that appellees failed to establish substantial-factor causation because there is no evidence of the quantitative exposure (dose) of asbestos fibers from Georgia-Pacific asbestos-containing joint compound to which Timothy was exposed, and because appellees failed to present evidence of the minimum exposure level leading to an increased risk of development of mesothelioma.

As set forth in *Flores*, *Stephens*, and *Smith*, the “each and every exposure” theory and the theory that there is no level of asbestos exposure below which the potential to develop mesothelioma is not present have been rejected. See *Flores*, 232 S.W.3d at 769–70, 773; *Smith v. Kelly-Moore Paint Co.*, 307 S.W.3d 829, 837 n.9, 839 (Tex. App.–Fort Worth, 2010, no pet.); *Stephens*, 239 S.W.3d at 311, 314–15. In order to prove substantial factor causation, a plaintiff must not only show frequency, regularity, and proximity of exposure to the product, the plaintiff must also show reasonable quantitative evidence that the exposure increased the risk of developing the asbestos-related injury. *Flores*, 232 S.W.3d at 769–72; *Smith*, 307 S.W.3d at 833; *Stephens*, 239 S.W.3d at 312. “Because most chemically induced adverse health effects clearly demonstrate ‘thresholds,’ there must be reasonable evidence that the exposure was of sufficient magnitude to exceed the threshold before a likelihood of ‘causation’ can be inferred.” *Flores*, 232 S.W.3d at 773 (quoting David L. Eaton, *Scientific Judgment and Toxic Torts—A Primer in Toxicology for Judges and Lawyers*, 12 J.L. & POL’Y 5, 39 (2003)).

Flores mandates that a showing of substantial-factor causation include quantitative evidence that Timothy’s exposure to asbestos increased his risk of developing an asbestos-related injury. See *Flores*, 232 S.W.3d at 772. Thus, the evidence had to not only show Timothy’s exposure to Georgia-Pacific asbestos-containing product on a frequent and regular basis, but also that the exposure was

in sufficient amounts to increase his risk of developing mesothelioma. *Id.* at 769–70.

Appellees contend their specific causation expert, Dr. Hammar, “analyzed the mathematical threshold of asbestos exposure leading to a multiple increased risk of mesothelioma, and testified that Timothy’s ten year exposure to Georgia-Pacific asbestos joint compound would have been enough in and of itself to cause his mesothelioma.” They state Dr. Hammar considered the threshold for increased risk of developing mesothelioma to be 0.1 fiber cc,¹⁰ and considered the frequency, regularity, and fiber concentration of Timothy’s ten years of exposure to Georgia-Pacific asbestos-containing joint compound, and testified, within a reasonable degree of medical certainty, that these exposures were sufficient, in and of themselves, to have caused Timothy’s mesothelioma.

Dr. Hammar testified he does not know of any safe level of exposure to asbestos under which disease does not occur. He opined that exposure to friable¹¹ asbestos fibers above background levels had the potential to contribute to the development of Timothy’s mesothelioma. It is his opinion that every exposure above .1 fiber cc contributes to the development of mesothelioma. He stated that information published in the Federal Register shows that at .1 fiber cc, statistically there are seven cases of mesothelioma per year.

These dosage opinions are consistent with Dr. Hammar’s opinions in *Stephens*. There he “opined that the level of exposure it takes to cause mesothelioma ‘could be any level above what is considered to be background, which, from my definition, would be anything greater than .1 fiber cc years.’ In sum, he stated: ‘I’m going to express an opinion that each and every exposure that an individual has in a bystander occupational setting causes their mesothelioma.’” *Stephens*, 239

¹⁰ “Asbestos exposure is generally measured in fibers per cubic centimeter (fibers/cc) on an eight hour weighted average. This is calculated by taking the amount of time an individual is exposed to asbestos and mathematically calculating a time weighted average over an eight hour day. . . . In all urban environments, there is a level of asbestos in the ambient air. This level, often called the background level, varies from location to location and ranges from .00001 to .01 fiber/cc.” *Bartel*, 316 F. Supp. at 607.

¹¹ “‘Friable’ refers to breathable asbestos.” *See Flores*, 232 S.W.3d at 767 n6.

S.W.3d at 315. He stated “that mesothelioma is a dose-responsive disease, and that a threshold exists ‘above which you may be at risk, below which you may not be at risk’ for developing the disease.” *Id.*

In *Stephens*, there was no quantitative evidence of the plaintiff’s exposure to Georgia-Pacific asbestos-containing joint compound, the product also at issue there. *Id.* at 321. Although the literature and scientific studies the experts relied upon supported a reasonable inference that exposure to chrysotile asbestos can increase a worker’s risk of developing mesothelioma, none of those studies undertook the task of linking the minimum exposure level (or dosage) of joint compound with a statistically significant increased risk of developing of the disease. *Id.* Thus, the court held that the opinions offered by the plaintiffs’ experts, including Dr. Hammar, lacked the factual and scientific foundation required by *Flores* and were legally insufficient proof of substantial-factor causation necessary to support the jury’s verdict. *Stephens*, 239 S.W.3d at 321.

According to John Maddox, M.D., the plaintiffs’ expert regarding specific causation in *Smith*, “[b]ecause asbestos dust is so strongly associated with mesothelioma, proof of significant exposure to asbestos dust is proof of specific causation.” *Smith*, 307 S.W.3d at 837. “Dr. Maddox opined that it is generally accepted in the scientific community that there is no minimum level of exposure to asbestos ‘above background levels’ below which adverse effects do not occur.” *Id.* After discussing the scientific literature relied upon by Dr. Maddox, the court held that the plaintiffs’ evidence “ultimately suffers the same defect as the plaintiff’s in *Stephens*” and that under *Flores*, Dr. Maddox’s opinion is insufficient as to specific causation. *Id.* at 839.

Here, appellees endeavor to rely on material practice simulation studies performed by their general causation expert, William Longo, Ph.D., a material scientist. Dr. Longo’s simulation studies were intended to determine the amounts of asbestos fibers released during mixing, sanding, and

sweeping Georgia-Pacific's (or its predecessor Bestwall's) asbestos-containing joint compound in a controlled environment. However, Dr. Longo admitted his studies could not establish an exposure level or dose for Timothy, particularly because of the many variables in the circumstances of a given work activity and location of the activity. Thus, Dr. Longo's testimony regarding the results of his material practice simulation studies do not quantify Timothy's exposure to asbestos fibers from Georgia-Pacific asbestos-containing joint compound.

On this record, appellees' evidence is insufficient to provide quantitative evidence of Timothy's exposure to asbestos fibers from Georgia-Pacific's asbestos-containing joint compound or to establish Timothy's exposure was in amounts sufficient to increase his risk of developing mesothelioma. Therefore, appellees' evidence is legally insufficient to establish substantial-factor causation mandated by *Flores*.

For the reasons discussed above, appellees' claims of negligence and product liability require proof of substantial-factor causation. See *Flores*, 232 S.W.3d at 774. We conclude that the evidence presented at trial is legally insufficient proof of substantial-factor causation necessary to support the jury's negligence and strict liability marketing defect verdicts against Georgia-Pacific. We sustain Georgia-Pacific's first issue.

APPELLANT'S SECOND AND THIRD ISSUES


In its second issue, Georgia-Pacific asserts that there was no clear and convincing evidence to support the jury's finding of Georgia-Pacific's gross negligence. Our disposition of Georgia-Pacific's first issue necessarily disposes of appellees' gross negligence claim against Georgia-Pacific. See *Transp. Ins. Co. v. Moriel*, 879 S.W.2d 10, 23 (Tex.1994).

Georgia-Pacific contends in its third issue that the trial court erred in denying its motion for mistrial and in vacating the order granting a new trial, warranting a remand of this case to the trial

court. Our disposition of Georgia-Pacific's first issue makes it unnecessary to address Georgia-Pacific's third issue. *See* Tex. R. App. P. 47.1.

CONCLUSION

There is legally insufficient evidence of causation to support the verdict against Georgia-Pacific. We reverse the trial court's judgment and render judgment that appellees take nothing on their claims against Georgia-Pacific.



ROBERT M. FILLMORE
JUSTICE

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