

SUPERIOR COURT OF JUSTICE - ONTARIO

RE: INNOCON and LAFARGE CANADA INC., Plaintiffs/Defendants by Counterclaim

and

DARO INDUSTRIES INC. and ROBERT DANNINGER, Defendants/Plaintiffs by Counterclaim

BEFORE: Schabas J.

COUNSEL: *Gregory W. Banks and Steve Gearing*, for the Plaintiffs/Defendants by Counterclaim

Angela Assuras, for the Defendants/Plaintiffs by Counterclaim

HEARD: April 2 – 5, 9, 10, 12, 15 – 19, 22 – 26, July 2 – 5, August 30, 2024

REASONS FOR JUDGMENT

Overview..... 2

Issues: the causes of action 6

The legal framework..... 6

 Breach of contract and the *Sale of Goods Act*..... 6

 Negligence 8

Causation..... 8

 Daro’s expert evidence 8

 Lafarge’s expert evidence 10

 Conclusions on the expert evidence..... 12

 Other evidence on causation 15

 The damage and its scope 15

 Inadequate evidence of primer application 16

 Lafarge’s tests 18

 Site and environmental factors..... 20

Slump adjustments	21
Conclusion on causation	22
Applying the <i>Sale of Goods Act</i>	22
No affirmative proof of a defect	22
Other probable causes have not been eliminated by Daro	23
Conclusion on Sale of Goods Act.....	23
Applying the law of negligence	23
Duty of care.....	24
Standard of care	24
Conclusion on negligence claim	25
Duty to warn	25
Defamation.....	26
Damages and remoteness	28
Intact’s claim.....	28
Special damages.....	29
Daro’s remediation costs.....	29
Money paid to Lafarge for the Fina	29
Costs of investigation.....	30
Increased cost of insurance	30
General damages for lost profit and harm to reputation	30
Conclusion on damages	34
Conclusion	35

Overview

[1] In the summer of 2011, the Four Seasons Hotel and condominium project (“FSH”) was under construction in Toronto’s Yorkville area. The general contractor of the project, Menkes Developments Ltd. (“Menkes”), required concrete slabs on the high-rise residential portion of the building to be levelled before flooring could be installed. Menkes contracted with the Defendant/Plaintiff by Counterclaim, Daro Industries Inc. (“Daro”), to conduct this work by supplying and installing a topping, DaroTopp XS, which was known as “Fina”, on floors 21-52. Each of the floors was about 8,000 square feet, or about 250,000 square feet in total. The price quoted by Daro to Menkes was \$477,600.00, although the total contract amount pleaded by Daro was \$631,009.22.

- [2] Fina is an anhydrite screed, similar to a cement product, consisting of water, anhydrite¹ and a filler, which can be manufactured at a cement plant and transported in a ready-mix form to a construction site where it can then be pumped and poured onto a surface. It self-levels a floor as it dries and hardens.
- [3] Prior to 2006, the use of screed for levelling floors was rare in North America. Floor leveling was typically done by hand, using bagged cement mixed on site, which is time-consuming and labour intensive. Screed, on the other hand, can be mixed at a cement plant and transported in a ready-mix truck to the construction site where it can be pumped and poured relatively quickly.
- [4] Screed was more commonly used in Europe. Daro had been incorporated by its co-founder, Robert Danninger (“Danninger”) in Canada in 2006 after Danninger, who was from Germany, had identified the opportunity to manufacture and install screed in North America.
- [5] In 2008, Daro partnered with the Plaintiff/Defendant by Counterclaim, Lafarge Canada Inc. (“Lafarge”), a large cement company, to develop and market screed products in Canada, which would be manufactured by Lafarge and, under the direction of Daro’s co-founder, Bernd Roppelt, be installed by Daro.
- [6] Between 2006 and 2011, Daro installed over 5,000,000 square feet of anhydrite screed floor topping, either with its own product, DaroTopp or, beginning in 2008, Lafarge’s similar product called Agilia Screed A (“Screed A”), in residential and low-rise commercial construction projects in Canada. Screed A was developed and manufactured by Lafarge based on Daro’s DaroTopp product, and Daro was the exclusive installer of Screed A.
- [7] Daro saw an opportunity to install screed in the large high-rise construction market in Toronto. However, it needed to develop a thinner screed than DaroTopp or Screed A, which had a recommended thickness of 20-50 millimetres when in a “bonded” application on top of an existing concrete slab.
- [8] In 2010 and 2011, Daro developed its Fina product, DaroTopp XS, which only required a thickness of 1-25 mm and could be “feather-edged”. Daro shared its findings with Lafarge which, in consultation with Daro, developed its own version of Fina, “Agilia Screed A Fina.” However, to achieve the reduced thickness and ability to feather-edge, Lafarge determined that the sand filler used in Screed A had to be replaced in Fina with a finer filler, namely, limestone.
- [9] Prior to the FSH project, between April 1 and August 19, 2011, Daro placed approximately 23,400 square feet of Fina supplied by Lafarge’s wholly-owned Toronto distributor and Plaintiff/Defendant by Counterclaim, Innocon, on at least five occasions, without experiencing difficulties or product failures. None of these installations involved high-rise buildings.

¹ Anhydrite is a mineral consisting of anhydrous (free from water) calcium sulphate, which is used as a binding agent for cement and plasters.

- [10] On August 16, 2022, Daro did a test pour of Lafarge-made Fina on the 22nd floor of the FSH of about 2,000 square feet. This test was observed by Danninger and representatives of Menkes and Lafarge. On August 22, 2012, Menkes issued a Purchase Order to Daro to install Darotopp XS on floors 21-52 of the FSH project.
- [11] Daro and its subcontractor, Floor Solutions Inc.,² poured Fina on at least floors 22 to 48 at the FSH project, between late August and early November 2011.³ The Fina for the project was Agilia Screed A Fina supplied by Lafarge’s Toronto distributor, Innocon.⁴
- [12] There were challenges with pumping the Fina to the high-rise floors for installation. Daro had a pump at ground level and another on the 21st floor. In order to achieve the required slump (or flowability) some Fina had additional water and/or superplasticizer⁵ added to it by Lafarge either at the plant or, in consultation with Daro, on site before it left the ready-mix truck; however, the installation by Daro proceeded smoothly and no problems with the product were identified at the time.
- [13] In December 2011 Daro poured Fina supplied by Lafarge for an office on the second floor of the FSH project, and in January 2012 Daro poured Fina for the 3rd floor ballroom and in the spa area on the 9th floor. Within days of the ballroom pour, Fina had cracked or turned to powder in some areas of the ballroom. This was determined to have been caused by Lafarge adding too much water to some of the Fina. Lafarge credited Daro’s account for the cost of the repairs to the ballroom floor in the amount of \$15,650.50 (\$13,850.00 plus HST). The ballroom, office and spa floors are not in issue in this lawsuit.
- [14] On January 24, 2012, Menkes advised Daro that some Fina poured on the upper floors was “hollow” or had come loose from some of the underlying cement floor slabs. According to Menkes, this needed to be resolved quickly, otherwise the installation of the final flooring materials by the flooring trades would be delayed.
- [15] Daro, Lafarge and Menkes inspected the floors and confirmed that there were “hollow” spots where the Fina had delaminated from the concrete below. Although not specifically complained of by Menkes, cracks in the Fina were also observed. Over the next several months Daro and Floor Solutions repaired the hollow spots as well as to some cracks in the floors using epoxy mortar. No complaint was made that the Fina had failed to level the floors or that it was otherwise defective in any way.
- [16] According to Daro’s records of the repairs, approximately 6,000 square feet of Fina was removed and replaced on floors 22 to 48 of the FSH project. This is less than 3% of the total

² Floor Solutions in turn sub-contracted to its related entity Specialty Concrete, which was described as the “union side” of the company because the FSH was a unionized project. I will simply refer to the subcontractor as “Floor Solutions”.

³ The Menkes purchase order referred to installing Fina on floors 21 to 52, but the evidence dealt with Fina installed on floors 22 to 48.

⁴ I will refer to Lafarge and Innocon collectively as Lafarge.

⁵ A water-reducing compound that can improve the flow of cement or cementitious products without adding water. The anhydrite binder used by Lafarge in Fina also contained some superplasticizer.

amount of Fina poured under the contract. Some floors required no repairs and the amount of repairs on other floors varied from about 25 square feet to, on one floor, about 1100 square feet.

- [17] Daro and Lafarge blamed each other for the problem. Lafarge said that Daro, prior to pouring the Fina, had, among other things, not applied the required primer to the concrete slabs properly, if at all. Lafarge's instructions, known to Daro, required that the underlying cement substrate be cleaned and that two coats of acrylic primer be applied appropriately to separate the Fina from the concrete. Lafarge also identified a greenish colour in some of the Fina that had been removed, which it claimed showed that Daro had failed to allow the primer to dry before pouring the Fina.
- [18] Daro, on the other hand, sent samples of Fina to experts in Germany for analysis who said the problem was due to Lafarge's use of limestone filler, of which Daro claimed to be previously unaware. The limestone, together with the addition of superplasticizer, they said, caused delayed hydration and expansion of the material resulting in upward bowing, or delamination; hence the hollow sounds where the Fina had not adhered to the concrete slabs below.
- [19] By the end of February 2012, Daro and Lafarge had parted ways.
- [20] Daro obtained coverage for the cost of repairs from its insurer, Intact. The total amount paid by Intact to satisfy Daro's claim was \$243,438.89.
- [21] In August 2012 Lafarge and Innocon sued Daro, claiming \$54,004.03 in damages for amounts Daro had been invoiced but had not paid for Fina supplied to Daro for the FSH project. Lafarge and Innocon also claimed \$6,000,000.00 in general and punitive damages against Daro and Danninger for defamation, as Daro and Danninger had advised third parties that the failure of Fina at the FSH project was due to batching mistakes by Lafarge and Innocon.
- [22] Daro and Danninger responded, pleading that Daro had paid Lafarge for all deliveries of Fina to the FSH project totalling \$235,030.37, and that its statements blaming Lafarge and Innocon were true. Daro and Danninger counterclaimed, seeking \$50,000,000.00 for breach of contract, negligence, negligent misrepresentation and defamation by Lafarge, as well as punitive damages of \$1,000,000.00. At trial, Daro claimed damages for loss of profits it says it would have earned for three years following the FSH project but for the actions of Lafarge in providing a defective product and by defaming Daro and Danninger. Further, based on an assignment of Intact's subrogated claim dated April 1, 2024 (the day before the trial commenced), Daro also sought \$243,438.89, plus interest and costs, for the remediation work.
- [23] At the outset of the trial, Lafarge and Innocon discontinued their action against the defendants. The trial then proceeded on the issues in the Counterclaim only. Daro and Danninger therefore led their evidence first. The Court heard 21 days of testimony from many witnesses, including experts for both sides. Detailed closing submissions were provided in writing, followed by a full day of oral argument.
- [24] For the reasons that follow, the Counterclaim is dismissed.

[25] Daro, as Plaintiff by Counterclaim, has the burden of proof, which it has not met. In short, I am not satisfied on a balance of probabilities that the cause of the delamination was due to any defect in the Fina, and in particular the presence of limestone filler used by Lafarge. The experts differed over whether the addition of limestone would have caused expansion resulting in delamination. However, if the use of limestone was the cause, one would have expected to see delamination everywhere, or at least in far more than 3% of the area where it was installed.

[26] Daro's experts in Germany did not conduct tests of the materials to confirm their delayed hydration theory, and to the extent Daro conducted tests in Canada, no results were disclosed. In contrast, the testing of Fina by Lafarge at the time, which was considerable, does not support expansion due to delayed dehydration as the cause. Nor does the evidence of Lafarge's independent expert.

[27] I find it more likely that the delamination of Fina from the concrete substrate was due to deficiencies in its installation by Daro and its subcontractors arising from improper or inadequate application of primer and due to site and environmental factors which were not properly controlled by Daro.

[28] I conclude that there is no evidence that Lafarge or its personnel defamed Daro. The decline in profits experienced by Daro over the subsequent few years, to the extent it may have been due to fallout from the FSH project, is more likely attributable to the risks associated with applying a new product in new circumstances. However, had I found Lafarge liable for breach of contract or negligence, I would have awarded special damages to Daro of \$14,036.78 and general damages of \$2,009,962.50.

[29] The subrogated claim is dismissed for reasons I give below.

Issues: the causes of action

[30] Daro pleads the following causes of action against Lafarge/Innocon:

- (a) Breach of contract, in particular, breach of warranties and conditions, express and implied, as provided by the *Sale of Goods Act*, R.S.O 1990, c. S. 1, s. 15(1);
- (b) Negligence, including negligent design of Fina, inadequate testing of it, and failing to warn of risks of using it; and
- (c) defamation

[31] I also address Daro's claim for damages.

The legal framework

Breach of contract and the *Sale of Goods Act*

[32] Daro relies on section 15 of the *Sale of Goods Act* which states, in part:

Subject to this Act and any statute in that behalf, there is no implied warranty or condition as to the quality or fitness for any particular purpose of goods supplied under a contract of sale, except as follows:

1. Where the buyer, expressly or by implication, makes known to the seller the particular purpose for which the goods are required so as to show that the buyer relies on the seller's skill or judgment, and the goods are of a description that it is in the course of the seller's business to supply (whether the seller is the manufacturer or not), there is an implied condition that the goods will be reasonably fit for such purpose, but in the case of a contract for the sale of a specified article under its patent or other trade name there is no implied condition as to its fitness for any particular purpose.

2. Where goods are bought by description from a seller who deals in goods of that description (whether the seller is the manufacturer or not), there is an implied condition that the goods will be of merchantable quality, but if the buyer has examined the goods, there is no implied condition as regards defects that such examination ought to have revealed.

[33] Daro asserts that the Fina was not “reasonably fit” for the purpose it was required. In this case there is no issue that Lafarge knew the intended use of the Fina and that Daro relied on Lafarge’s skill and judgment in manufacturing the Fina. The issue is solely whether it was “reasonably fit” for the purpose of levelling floors at the FSH project.

[34] Daro can prove its case by either affirmatively establishing the defect probably existed at the time of delivery, or by eliminating other probable causes following delivery of the Fina which would permit the court to infer that the Fina was defective and the cause of the damage. As stated by Keenan J. in *Smythe Clark Inc. v. Eurobags (Canada) Inc.*, 1991 CarswellOnt 2016, [1991] O.J. No. 1148, at para. 27:

The plaintiff will discharge that burden by showing that the defect probably existed at the time of delivery. Where there is a patent defect, it will be discovered upon inspection. Proof is more difficult when the defect is latent and does not show until later, and the possibility of other explanations has arisen. When the latent defect manifests itself, the purchaser must show that the defect existed at the time of delivery. That may be done by producing evidence to exclude other probable reasons for the emergence of the defect. However, the purchaser is not required to eliminate every other possibility.

[35] The precise cause of the defect need not be proven, but the buyer still “bears the onus of proving the existence of a defect on a balance of probabilities”: *Muskoka Fuels v. Hassan Steel Fabricators Limited*, 2011 ONCA 355 at para. 18, citing Laskin C.J. in *Schreiber Brothers Ltd. v. Currie Products Ltd.*, [1980 CanLII 11 \(SCC\)](#), [1980] 2 S.C.R. 78. Chief Justice Laskin’s decision in *Schreiber Brothers* also noted at page 86 that “[t]here is no doubt that the plaintiff purchaser, suing for damages for breach of the implied condition of merchantable quality, had

the burden of proof, in the light of the pleadings, of excluding its faulty workmanship as a probable cause of the blistering of the asphalt.”

Negligence

[36] Daro claims Lafarge was negligent in manufacturing and supplying Fina which it knew or ought to have known was defective and unfit for its intended purpose. The requirements to succeed in a claim for negligence are well established and were summarized in *Mustapha v. Culligan of Canada Ltd.*, [2008] 2 S.C.R. 114, 2008 SCC 27, at para. 3 as follows:

- a) the defendant owed the plaintiff a duty of care;
- b) the defendant's behaviour breached the standard of care;
- c) the plaintiff sustained damage; and
- d) the damage was caused, in fact and in law, by the defendant’s negligence.

[37] The burden of proof is on Daro to establish each element of the tort on a balance of probabilities.

Causation

[38] This case turns on causation – whether the delamination of Fina was caused by a defect in the design mix or some other reason. Regardless of whether the cause of action is breach of contract or negligence, the burden is on Daro to prove that the Fina was defective and was the cause of the damage, on a balance of probabilities.

Daro’s expert evidence

[39] Daro’s case that the Fina delivered by Lafarge was defective is largely based on its expert evidence that the Fina contained limestone filler which is said to have led to delayed hydration and delamination.

[40] Following the discovery of problems in January 2012, Daro retained Walter Heinz-Dieter Altmann, one of the developers of anhydrite screed in the 1970s in what was then East Germany. Daro sent Mr. Altmann two samples of floor topping taken from the “ballroom” and the “office.” Altmann then engaged Dr. Klaus-Jurgen Huenger, a mineralogist in Germany, to analyze the samples in his lab. Both Altmann and Huenger testified at the trial.

[41] Dr. Huenger’s scan of the samples found what he described as “massive problems with dehydration” due to the dense matrix of the substance, a thick layer of syngenite which prevented moisture from escaping, and the presence of a fine limestone filler on the top of the sample, all of which he said resulted in moisture retention in the screed “for a long time, which leads to swelling in the screed.” This type of post-hydration process can take two to three months, or longer, he said. This caused Huenger to conclude that the problem with the Fina was the presence of the limestone filler, which is dense and retains moisture.

- [42] Dr. Huenger found evidence of primer on the ballroom sample but not the office sample. Nevertheless, as the samples showed no signs of cement components on the bottom, he concluded that primer had been correctly applied to prevent air and water from seeping into the screed from the underlying cement.
- [43] In 2022, ten years later, Dr. Huenger analyzed three samples of delaminated screed taken from the 22nd, 47th and 48th floors of the FSH. The results from the three samples varied somewhat, but Huenger concluded that the 2022 results were “largely consistent in principle” with the 2012 results, “especially the enrichment of calcite [limestone] on the top of each sample.”
- [44] In cross-examination, Dr. Huenger and Mr. Altmann were asked about the underside of the ballroom sample, which had holes that might be consistent with “outgassing” – a phenomenon described to me in different ways, but which arises if there is an inadequate barrier, or primer, between the concrete substrate and the screed. As a result, the substrate can absorb moisture from the screed, displacing air which seeks to escape through the screed creating holes or dimples. Altmann and Huenger did not agree that the holes were signs of outgassing, but said the holes were simply the reflection of exposed aggregate on which the Fina was placed.
- [45] Mr. Altmann, who has worked with screed for decades and is a publicly appointed expert in Germany, provided a short report in February 2012. He agreed with Dr. Huenger’s findings and opined that the problem with the samples was the use of limestone filler and a “greater amount of superplasticizer.” Altmann also prepared a report in 2013 asserting that, based on his “detailed investigations, the limestone filler found in the material pieces would not have been allowed to have been used, if proper material testing was done in advance.” At the trial, Altmann said that in Germany limestone is not used as a filler in anhydrite screed, but only as an aggregate, because it absorbs more water. However, his 2013 report said that “some limestone types” have water absorption.
- [46] Mr. Altmann also prepared a report in 2022 regarding the three samples sent to him at that time, which were also analyzed by Dr. Huenger. That report says that the samples contained “faulty material” but provides no additional insight.
- [47] Daro also relied on the expert evidence of Robert Sparling, who was qualified as an expert in construction and material failures. Sparling was retained by Intact in 2012 to investigate the failure for insurance purposes. At the outset of his work, Sparling was provided with the reports of Altmann and Huenger. Despite being based in Toronto, Sparling did not go to the FSH project to inspect the damage or assess the scope of the damage, sending someone else who he said might have gone to about four floors, perhaps accompanied by a Daro employee. That person was reported to have found “hollow spots under the topping in some areas.”
- [48] Mr. Sparling’s 2012 report supported Intact’s decision to accept Daro’s insurance claim based on the conclusions of Altmann and Huenger. Sparling’s investigation was limited. He appears to have worked closely with Roppelt at Daro, including creating samples using the materials at the time to test the Fina, but there is no evidence of the results of those experiments from him or from Roppelt.

[49] Mr. Sparling's later reports, in 2022 and 2024, were prepared for Daro for this action. He was essentially called upon to restate the conclusions he reached in 2012, but he also addressed data disclosed by Lafarge which, Sparling said, supported delayed hydration. Relying on the adjustments that Lafarge made to the mix design during and after the pours at the FSH, he opined that Lafarge had performed inadequate testing of the Fina. As I discuss below, Sparling's analysis of the Lafarge data to support this conclusion was based on a misunderstanding by him of the data which, in fact, does not support delayed hydration and expansion at all.

[50] Mr. Sparling, like Altmann and Huenger, simply accepted Daro's assertion that the surfaces were clean, that primer was adequately applied, and that environmental conditions did not cause cracking or expansion.

Lafarge's expert evidence

[51] Lafarge's expert, Dr. Pedro Carballosa de Miguel, is a materials engineer at the Eduardo Torroja Institute of Construction Sciences - IETcc which is a branch of the Spanish National Research Council – CSIC, in Madrid. Dr. Carballosa has conducted investigations into failures of anhydrite screed and published many papers on the subject of anhydrite and cementitious materials.

[52] Dr. Carballosa noted that the testing of samples by Dr. Huenger involved using X-ray diffraction which provided a very limited scan of portions of the material. Carballosa conducted more detailed microscopic imaging tests of several samples taken from the 22nd and 48th floor of the FSH.

[53] Dr. Carballosa disagreed with several key findings of Dr. Huenger. One was Huenger's reference to a dense matrix of the material providing no room for hydration. Carballosa's tests showed that the samples had a porous microstructure. Further, he found that the bottom of the samples had less porosity, or a higher degree of hydration, which was consistent with being closer to the concrete which would absorb water from the screed if there was an inadequate barrier of primer. Dr. Carballosa also found no evidence of expansion at the microstructural level, consistent with a porous structure.

[54] Dr. Carballosa made several other observations about the behaviour of screed which are inconsistent with the delayed hydration theory of Altmann and Huenger.

[55] Dr. Carballosa conducted experiments making and testing screed similar to Fina in order to support his conclusions. While his experiments may be criticized for not using the identical materials used by Lafarge, which are no longer available, the results support his conclusion that delayed hydration is not a viable or persuasive explanation for the defects in the Fina found at the FSH. His results showed very little, if any, expansion in Fina.

[56] Dr. Carballosa concluded that the "main cause" of the cracks and hollow spots was due to severe shrinkage caused by a loss of water when the screed dried. He noted that this "severe volumetric contraction" results from "forced surface evaporation with auxiliary means (gas

vent heaters) and by the absorption of a concrete substrate lacking a well-executed primer in accordance with the manufacturer's recommendations.”

[57] The lack of an effective primer layer between the concrete and the screed supports what Carballosa described as a “high probability” of a “laitance phenomenon” in which water accumulated on the surface resulting in a weakened surface layer – also seen by Altmann and Huenger. This phenomenon, according to Dr. Carballosa, explains the hollow spots or delamination. The causes – including heat and inadequate or ineffective primer application - are also consistent with the isolated and irregular failure of small portions of the screed, rather than a massive failure due to a manufacturing defect in all the material.

[58] In explaining the delay in manifestation of hollow spots, Dr. Carballosa testified that environmental conditions, such as sunlight and heaters, play a significant role in the behaviour of screeds. He noted in his report that cracking can occur in the initial stages but manifest visually over time. There is no evidence as to when the hollow spots actually developed or were discovered, just that they were reported to Daro in January 2012.

[59] Photos taken by Mr. Sparling's colleague show that the cracking was hairline – which was not remarkable and not likely to be of concern. Dr. Carballosa testified that they looked like shrinkage cracks, noting that if there was cracking due to expansion it would have been parallel to the walls, but this was not the case. Altmann suggests a similar characteristic, noting that if there is expansion it “can easily stress walls made of aerated concrete to such an extent that cracks in the masonry and even its displacement occurs.”

[60] Lafarge also adduced expert evidence from Lloyd Keller, a civil and structural engineering technologist with over 40 years of experience in construction, particularly concrete structures. He worked for 30 years for EllisDon, one of Canada’s largest construction companies. He has developed mix designs, including floor toppings, and has written on and researched concrete mixes. Mr. Keller has also investigated the impact of many topping materials, including floor topping failures. He has not, however, worked with materials using anhydrite binders, but then neither had Sparling, who also had far less experience with cement products.

[61] Mr. Keller participated in drafting the Canadian Standards Association (“CSA”) guidelines on installing floor toppings such as screed, which contain detailed requirements, including ensuring a clean surface which should be inspected by the owner, or general contractor, prior to installing the topping. He noted that limestone is commonly used in the concrete industry as a filler, as is water and superplasticizer, to ensure flowability, or slump.

[62] Mr. Keller was of the view that Lafarge had conducted adequate research and testing of Fina for use in the FSH project. He referred to development and testing of it since early 2011, including the use of limestone filler and anhydrite binder. In Keller’s opinion, Lafarge’s testing was similar to testing of similar products by other manufacturers.

[63] Mr. Keller also reviewed the adjustments to the mix design of the product made by Lafarge during the course of the project, finding that they were minor and of the type commonly carried out by ready-mix companies to meet challenges of site conditions. In this case, the challenge

was adequate flowability to pump the product to high-rise floors. This was supported by Roppelt's evidence that the mix is not a "static product" and is always being adjusted to address the ingredients and flowability.

[64] Mr. Keller was critical of Daro's preparation for and installation of the Fina at FSH, noting in particular the almost complete failure by Daro to document its work and verify that it was done correctly. Daro did not have any quality assurance program that would identify procedures to be followed or checklists to ensure that all necessary steps were completed and documented.

[65] Mr. Keller noted that although Daro said the substrate was broom-swept before application of primer, published industry standards and the primer data sheet both recommended vacuum cleaning to remove all dust and moisture. There were other steps relating to the application of the primer that needed to be taken as well. Keller stated that Daro failed to have any quality assurance program and Daro did not take reasonable steps to ensure that proper environmental controls were in place following the pouring of the Fina at the FSH project.

Conclusions on the expert evidence

[66] I have concerns with the evidence of Altmann and Huenger, in addition to Carballosa's criticisms.

[67] One concern is their independence. At the outset, in early 2012, Altmann and Huenger were retained by Daro directly. Danninger told Altmann that the cause of the failure appeared to be expansion and delayed hydration. And both promptly confirmed that conclusion without inquiring into any other causes.

[68] At no time then or later did Altmann or Huenger conduct tests – including in 2012 when the same materials were available – to attempt to confirm their conclusions about the impact of a limestone filler. Nor did they review the results of Lafarge's testing of the Fina at the time, which did not show hydration or expansion. When asked why no testing was done, Altmann said simply that he was not asked to perform any tests. This is surprising given the direct contact between Altmann and Daro at the time, and when Roppelt was actually making samples using materials from Lafarge.

[69] In 2012, Altmann and Huenger were only provided with samples from the "ballroom" and the "office", which were poured in December 2011 and January 2012. These are not the areas of delamination for which Daro seeks compensation. The ballroom showed signs of cracking quickly, which resulted from too much water being added to the Fina, for which Lafarge promptly took responsibility and reimbursed Daro for the repair costs. It is the Fina on the upper floors poured in the late summer and early fall of 2011 that matters in this action. Yet Altmann and Huenger only reviewed samples from the high-rise floors ten years later, in 2022.

[70] There also appears to have been continuing close contact between Danninger, Roppelt, Altman and Huenger. Altmann's report of September 19, 2022, for example, noted that samples reviewed in that report were opened in the presence of all of them; albeit Danninger

was on Zoom from Canada, but Roppelt was present in Germany. Other reports referred to contact with Danninger and Roppelt.

- [71] Altmann was given other information which appears to have influenced him in his later reports, asserting that “Lafarge/Innocon was constantly experimenting with superplasticizers and fillers.” He drew inappropriate parallels to problems with Fina poured at another site, 80 Commerce Valley Drive in Toronto, on October 4 and 5, 2011. However, that project was very different from FSH, involving a low-rise retrofit. The failure of the Fina was on a large scale – about 50% of the material had to be replaced. It occurred within a few days of the pour and was due to “excessive filler additions” causing the Fina to turn to powder, as acknowledged by Lafarge. As with the ballroom, Lafarge promptly reimbursed Daro for the cost of those repairs.
- [72] Altmann and Huenger repeatedly referred to “massive drying problems” and a 60% expansion of unreacted anhydrite in the Fina based on the leading text on anhydrite binders, which states that there is a 60% volume increase when water is added to anhydrite. But neither of them observed this phenomenon in the samples. If there was a 60% volume increase due to the presence of limestone, one would expect to see failure on a massive scale, not just 3% of the Fina poured at the FSH project. Neither Altmann nor Huenger addressed the fact that 97% of the screed did not have delamination issues or “drying problems”, let alone “massive drying problems.”
- [73] Altmann and Huenger appear to have simply accepted that primer was applied correctly, even though the few samples reviewed showed different features relating to primer.
- [74] Altmann stated in his direct examination that one coat of primer was probably sufficient, but agreed in cross-examination that one should follow the manufacturer’s instructions and that the manufacturer of the primer used by Daro – Mapei Primer L – recommends two coats, which “should be done.” Further, when asked whether primer which penetrates into screed will compromise the product, Altmann, surprisingly, said he has not investigated this and could not give an answer. Sparling, on the other hand, conceded this point.
- [75] I did not find persuasive Altmann’s and Huenger’s answers on the photographs suggestive of outgassing, which is consistent with inadequate primer application. A number of photographs showed a greenish colour consistent with primer mixed in, and the explanation about bumps or holes being a reflection of the uneven surface of the concrete substrate rather than outgassing is not consistent with the evidence that the substrate was power-trowelled to give it a smooth finish before pouring the Fina.
- [76] Altmann in particular wrote and testified as an advocate, criticizing qualifications of others and stating facts and conclusions in unequivocal language based on incomplete information or without verification.
- [77] I give no weight to the evidence of Mr. Sparling. While qualified as an expert in construction and material failures, his experience with screed was limited to this case. When he started his work, Sparling had the reports from Altmann and Huenger, which he essentially echoed. Sparling did not have an open mind to other causes of the delamination, such as

improper or inadequate application of the primer, which he acknowledged was important and can be an issue. He was dismissive of the lack of control of environmental factors by Daro or their potential impact. His starting point was that delayed hydration had caused the problems, and he did not do any testing involving primer because of that assumption.

[78] Sparling was dismissive of Carballosa's view that inadequate application of primer may have caused the problems, asserting that "our site examination found that primer was present." But Sparling did not attend the site himself, and his colleague only reviewed a small portion of the project. He simply relied on the very limited evidence – or assertions – of Daro (which I address below) that primer was applied correctly.

[79] Sparling, together with Roppelt, who had worked extensively with screed in Europe and oversaw the installation of the Fina, created samples in 2012 using the same materials, with and without limestone, but either did not conduct expansion tests on them, or did not report their results. Yet, according to Danninger, these samples supported the delayed hydration and expansion theory.

[80] Sparling said the Fina was "doomed to fail", but when asked why only a small portion of the Fina developed cracks and delaminated, he did not have a credible response. Sparling said he "assumed" there were different mixes and speculated that perhaps some Fina had limestone and some did not – a statement with no support in the evidence. All Fina produced by Lafarge and delivered to the FSH project had limestone.

[81] Sparling's reports and testimony displayed advocacy, exaggerating in some instances and dismissive of the expertise of others who reached different conclusions. He also attempted to draw parallels between the FSH project and the failed application of Fina at 80 Commerce Valley despite the many differences in the two projects. He had not investigated 80 Commerce Valley and was unaware of details of that project, including that the Fina failed within two days of installation. Sparling said he referred to it in his report at the suggestion of counsel. His advocacy was also apparent in the dismissive way in which he criticized Lafarge's expert on standard of care, Mr. Keller.

[82] Perhaps of greatest concern is that Sparling misinterpreted testing data from 2011 and 2012 produced by Lafarge which he incorrectly claimed supported the delayed hydration and expansion theory. Sparling misread the Lafarge data, asserting that it showed expansion of up to 5%, which, he said, is "huge." In fact, as Dr. Abdurahman Lotfy, a civil engineer with a Ph.D. on self-consolidating and levelling concrete who ran the lab at Lafarge, explained, the data showed that there was very limited expansion and shrinkage in all the Fina test samples reviewed by Lafarge during the fall of 2011. There were other mistakes and misinterpretations of information made by Sparling, all of which cast doubt on his expertise respecting screed, the rigour of his investigation and reports, and the reliability of his evidence.

[83] In short, none of Daro's experts took steps to prove the theory of delayed hydration, nor did they question or investigate whether primer had been applied adequately and the substrate prepared properly.

[84] In contrast, I found Dr. Carballosa's evidence independent, impartial, and compelling. He demonstrated a clear expertise in the field. He conducted much more detailed investigations into the samples, including microscopic imaging, than had been completed by Altmann and Huenger.

[85] Further, Dr. Carballosa conducted experiments with similar materials to see if the delayed hydration theory could be supported. Although Daro's experts criticize Carballosa's experiments for not using the identical materials, those materials were not available ten years later – unlike the situation in 2012, when Daro's experts had the opportunity to use the actual materials used by Lafarge but conducted no experiments. Carballosa's experiments included trying to induce hydration and expansion by adding water, but no expansion occurred. His finding that there was no evidence of expansion at the microstructural level was compelling. As counsel for Lafarge put it in their closing submissions, "in the absence of microcracking, there can be no macrocracking."

[86] Dr. Carballosa also conducted experiments respecting the primer, which showed that screed poured on one coat of primer was more likely to delaminate than if poured on a surface with two coats of primer.

[87] Mr. Keller was also a persuasive witness. He had a detailed knowledge of, and expertise in the subject matter. I accept his evidence that the testing of Fina was adequate and that the adjustments to the mix by Lafarge over the course of the project were normal in the industry with a new product to adapt the product to site demands.

Other evidence on causation

The damage and its scope

[88] Lafarge's employees who investigated the damage in January 2012 testified that there was no pattern to the delamination – some floors were affected, others were not. The location of the floors where repairs were needed followed no pattern. Indeed, if there had been expansion, as Dr. Carballosa pointed out, there ought to have been cracking parallel to the walls where the screed would have had to push up, but there was no evidence of this phenomenon. To the extent there was cracking, as opposed to delamination, based on the photographs Carballosa said it looked like there was shrinkage, not expansion.

[89] Bill Lambros, a civil engineer who at the time was the Product Manager for Value Added Concrete Products at Lafarge, worked closely with Daro in developing the screed business. He testified that if there had been a problem with the Fina itself he would have expected that all of it would have cracked and delaminated. After walking several of the floors when the problem was reported, Mr. Lambros said that cracking was inconsistent and looked like shrinkage cracking, and there was only a small amount of delamination – perhaps less than 1% in the areas he observed.

[90] Christine Gilbert, at the time a Specialty Concrete Products Manager with Lafarge, was the principal Lafarge contact for Daro during the pours. A civil engineer, she testified that the cracking was inconsistent, with some rooms in a condominium unit having many cracks and

other rooms having none, and some floors having cracks throughout while other floors had no cracks. She noted increased cracking in areas where heaters had been placed, but this too was not consistent.

[91] Lara Yousif, another civil engineer with Lafarge at the time, testified that she also “walked about eight floors” noting hollow sounds in some areas.

[92] In short, Lambros, Gilbert and Yousif all testified that the scope of the damage was inconsistent. Some areas had no damage, some showed signs of cracking, and there were some areas where delamination had occurred which needed to be repaired.

[93] Yousif and Gilbert also testified about observing primer mixed in with the screed, which manifested itself in a green tinge. At the time, Gilbert emailed Danninger and specifically stated that there were concerns with primer being mixed with the screed. Photographs support these observations. Daro’s expert, Sparling, agreed that if primer was mixed with screed this meant that Fina was applied when the primer was still wet. Danninger agreed that Fina must not be poured on wet primer, noting that the first coat dries quickly but the second coat takes longer to dry. Danninger’s evidence was that all of this was known to Floor Solutions which was very experienced in applying screed.

[94] Gilbert stated that the undersides of samples showed signs of outgassing and referred to photographs supporting that conclusion. Lambros also testified that he observed bubbles and craters on some of the poured Fina, which is consistent with outgassing caused by inadequate sealing of the concrete by primer.

[95] Daro’s own evidence of repairs carried out in 2012, was that it removed and replaced just 5,947 square feet of Fina on floors 22 to 48. This represents less than 3% of the Fina that Daro placed in the residential floors at the FSH. This strongly supports the conclusion that the delamination problem – which was the issue, not minor cracking – arose from something other than the product itself.

Inadequate evidence of primer application

[96] There is no dispute that prior to installing Fina, the surfaces of the concrete slabs were to be cleaned and a minimum of two coats of primer applied.

[97] Lafarge’s guide for installing screed in such “bonded applications” (where the screed is placed on top of a cement surface as opposed to, for example, a plastic barrier or “floating” subsurface) states that “the concrete substrate must be primed with the appropriate bonding/primer” and that the primer manufacturer’s instructions must be followed in order “to seal the concrete surface against out-gassing and to protect the water in the screed from being absorbed into the dry concrete slab.” These requirements were also contained in data sheets published by Daro.

[98] Lafarge directed Daro to use Mapei Primer L, which Daro had used many times. Mapei provided detailed instructions of how the primer was to be applied, including appropriate environmental factors such as the temperature, the time to wait between applying coats, and

how soon after its application screed or other materials should be applied. These requirements were well known to Daro and to Floor Solutions, as Danninger testified.

[99] Daro's evidence of its work, however, including preparing the surfaces, applying the primer and pouring the Fina, was very weak. Although Roppelt testified that the floors were cleaned and primer was applied in accordance with the manufacturer's instructions, when he was at the FSH he was usually at ground level receiving the Fina, testing the slump and operating the pump, rather than overseeing the work high above.

[100] Under the contract between Daro and Menkes, Menkes was to provide a clean surface. No one from Menkes testified. Roppelt said that if the surface was not adequately cleaned then Daro and Floor Solutions would have cleaned it.

[101] The installation work, including preparatory work, was done by Daro's employees – Roppelt's son Gino and a man named Pete – and three employees of Floor Solutions. None of them testified.

[102] Further, the evidence of who actually applied the primer, as well as the timing and manner in which it was applied, was confusing and inconsistent as between Danninger (who was frequently off-site and only "sometimes" observed the primer being applied), Roppelt, and Fabrice Forte, who was the principal of Floor Solutions but was never on site.

[103] No daily logs were kept and the documentary evidence of applying primer is sparse. One undated note in Danninger's handwriting refers to applying primer on Day 1, but only applying "primer thin spots" on Day 2. Danninger could not recall why he wrote "thin spots." This raises the question whether a second coat was applied to all of the surface, as required by the manufacturer, if at all.

[104] In response to many questions about the actual preparation and application of the Fina, Danninger's response was to "ask GG" – as Roppelt was known to everyone. But, as I have noted, Roppelt was outside on the ground, not on the floors.

[105] Daro's time sheets are of little assistance, rarely saying anything beyond "prep" or "cleaning" or "primer L" or "pour Fina", without any times or other details. There was conflicting evidence of who even prepared the time sheets. Danninger said they were prepared by Roppelt, but Roppelt said they were prepared by either Gino or Pete, who did not testify. Mr. Forte said he had never seen Daro's time sheets, even though they record time spent by employees of his company, Floor Solutions.

[106] There was also inconsistent evidence about the type of primer used. Roppelt said that on some floors a different acrylic primer made by Maxxon was applied, despite Lafarge's direction to use the Mapei product. Forte disagreed, testifying that only Mapei was used.

[107] Daro argues that Lafarge often had people on site as well, including Christine Gilbert, who did not raise concerns about the primer or application of the Fina. But Lafarge was there to ensure delivery and make adjustments to the slump as the product came out of the truck, not to oversee the application of the Fina. Gilbert said she did not have personal knowledge of

Daro's primer application, and an email she prepared later, in January 2012, setting out when Daro had primed came from Daro, not from any observations by her or anyone else at Lafarge.

Lafarge's tests

- [108] Lafarge conducted an investigation in 2012 into factors that would lead to "de-bonding" of Fina. It concluded that "primer application and dosage proved to be a key factor." This is consistent with Dr. Carballosa's tests conducted a decade later. While Daro is critical of Lafarge for not conducting primer tests prior to selling Fina, and those tests suggested that the optimum time to wait for installing Fina after the second coat of primer was longer than the primer's recommendations, the findings of Lafarge and Carballosa on the importance of proper primer application are not challenged or contradicted by Daro.
- [109] Dr. Lotfy, who ran the lab at Lafarge, presented detailed evidence of the development of Fina by Lafarge in 2011, including extensive experimentation with materials that could be used in the product. This included different fillers, binding agents and superplasticizer, and different combinations and quantities of materials to develop a viable mix design.
- [110] Lotfy reviewed spreadsheets showing the development and testing of the product in 2011. This included data showing that Fina did not undergo expansion using limestone as a filler, and that there was a very small amount of shrinkage. These are the spreadsheets that were misunderstood by Sparling.
- [111] Daro nevertheless argues that Lafarge ought to have tested Fina's performance in a high-rise setting before supplying it for the FSH project. This is disingenuous. Danninger testified that he was unconcerned with using Fina for the first time in a high-rise setting, noting that they had experience with Screed A. As he put it, the application was the same whether it was on the 5th or the 50th floor. None of Daro's experts raised a concern about a high-rise application either.
- [112] Fina was initially created by Daro, as DaroTopp XS. Daro had worked closely with Lafarge for years developing screed products, and this was also the case with Fina as the two companies worked together as they tried it out successfully at several locations in 2011 prior to the FSH project.
- [113] Roppelt had a unique relationship with Lotfy. Roppelt came to the Lafarge lab frequently, often bringing samples to be tested. This reflected the close working and personal relationships that had developed between people at Lafarge (Lambros, Gilbert and Lotfy) and Roppelt and Danninger at Daro.
- [114] Nevertheless, Roppelt testified that he did not work with Lafarge to develop its Fina product. He claimed that Fina was introduced to Daro by Lafarge, which I do not accept. It was Daro that saw the opportunity to develop a feather edge product that could be used in high-rise construction. Indeed, the contract between Daro and Menkes called for DaroTopp XS to be used, not Lafarge's Fina.

- [115] Roppelt and Danninger claimed to be unaware of the use of limestone filler in Lafarge's Fina product. Roppelt said he used reactive fillers like dry ash, but seemed not to have shared that with Lafarge.
- [116] I do not accept that Daro did not know of Lafarge's use of limestone in Fina. Daro and Lafarge had a very close and collaborative relationship. Lambros and Roppelt had travelled to Europe together to investigate anhydrite binders. Roppelt and Lambros had developed friendships with the Lafarge people. Daro and Lafarge had a common interest in developing and marketing screed products, including the unique and innovative feather-edge product, DaroTopp XS or Fina.
- [117] All pours by Daro of Lafarge-made Fina prior to the FSH project contained limestone filler. When Fina failed at 80 Commerce Valley in early October due to excessive filler, Roppelt said he was aware Lafarge had used limestone. This was in the midst of the high-rise pours at the FSH project. Further, in making an application to the Canada Revenue Agency for a Scientific Research and Experimental Development (SR&ED) Expenditures Claim, Danninger outlined Daro's development and testing of its DaroTopp XS and made reference to use of limestone as a potential filler.
- [118] Roppelt and Danninger were also contradicted by Lotfy and Lambros. Lambros testified that when Lafarge was developing its Fina product in 2011, Roppelt was aware that the sand Lafarge had available would not work as a filler to achieve a feather edge and that Lafarge used limestone instead. Lotfy said they discussed the need for a substitute for sand as a filler. He recalled Roppelt suggesting they use cement sand but this too would not work. Lotfy said they started using limestone as a filler in or around March 2011 and that this was known to Roppelt, who came to the lab and was aware of the test results. Lotfy also noted that limestone is a common filler and is approved as a substitute for sand by the CSA. This was confirmed by Lloyd Keller.
- [119] Lafarge continued to test Fina throughout the fall of 2011 and into 2012 as it adjusted the mix design. This is not surprising. As Danninger and Lotfy both testified, the Fina product, with the ability to have a feather edge, was a unique and innovative product which would be expected to evolve with experience and further research. Lotfy testified that Lafarge is always testing its products and adjusting them to improve performance. As Lotfy said, "we never stop testing."
- [120] In cross-examination on the tests conducted in November 2011 and later, Lotfy said that they continued to adjust the mix in order to achieve the required slump without compromising the product. As Lotfy explained, if too much water is added there can be segregation which leads to failure, as was the case with the ballroom in January 2012. It is clear that there was considerable communication between Daro – especially Roppelt – and Lafarge (Lambros, Gilbert and Lotfy), about adjustments made to the Fina using water and superplasticizer in order to achieve a higher slump to resolve challenges of pumping it to the high floors in the FSH.

- [121] At the trial, Daro made much of the continued testing. Altmann was critical of Lafarge for not conducting field tests for several months when it changed the mix design. However, he acknowledged that adding a small amount of water would not require testing. Altmann gave the example of changing the filler, such as using a new sand filler. He said that if additional amounts were added, “it has to be checked.” But the filler, limestone, was not changed.
- [122] Dr. Lotfy had identified some concerns with the use of superplasticizer and its impact on the performance of Fina. Moreover, in the summer of 2011, the binder used to that point in Fina – obtained from a company in Holland, Gyvlon – changed to a different binder by the same manufacturer which included superplasticizer, which may have helped increase slump. However, there is no evidence that this change had any impact on the performance of Fina installed at the FSH project. As Dr. Lotfy said when cross-examined on the change, the new binder only meant less superplasticizer might need to be added to achieve the required slump.
- [123] Daro also complained that the ongoing testing showed that Fina did not always reach the represented compressive strength. However, there were several different Fina products with different compressive strength requirements, and there is no evidence that the Fina delivered to the FSH did not meet the required specifications or that any deficiency in compressive strength led to delamination.
- [124] The five applications of Fina before the FSH project were monitored closely by Daro and Lafarge as they tested the product on a range of sites. There is no evidence that the Fina at those other locations, which also contained limestone, failed or delaminated in any way. Fina did fail at the later project at 80 Commerce Valley, but that failure was apparent almost immediately and was due to “excessive filler additions” caused by Lafarge, which reimbursed Daro for the cost of repairs. Daro pleaded that what happened at 80 Commerce Valley supported its position, but this argument was not seriously advanced at the conclusion of the trial.

Site and environmental factors

- [125] There were other practices that Daro was required to follow when installing the Fina.
- [126] One instruction common to all Lafarge screed products, and also found in Daro’s data sheet for DaroTopp XS, is to avoid drafts or a “chimney effect” from stairwells or other vertical openings, and to keep windows and doors closed where screed is poured. In its quote to Menkes for the FSH project, Daro stated that the site “must be completely draft proof for 48 hours following installation.” This would be particularly relevant to high-rises.
- [127] However, there is no evidence that Daro, or Menkes, took steps to avoid drafts from stairwells or elevator shafts in the installation process at the FSH. Danninger, who was rarely present on the floors when Fina was being poured, said he could not remember if elevator shafts or stairwells were covered, despite their proximity in a high-rise. Photographs show that windows were left open on some floors as the Fina was installed and left to dry.
- [128] The instructions for installing the screed also warned of keeping it out of direct sunlight that could heat the topping above 30 degrees Celsius. Yet photographs and videos showed the

screed being exposed to direct sunlight while being poured. Altmann was dismissive of this being a potential cause, stating this would only be a concern in temperatures above 35 degrees which he said could not have been the case as the pours were in October and “towards winter.” He provided no source for these opinions. October is not winter in Toronto, and the pours began in late August, which is still the summer in Toronto.

[129] Daro argued that there were tinted windows on the FSH which would reflect the heat and noted that Lambros and others at Lafarge did not raise sunlight, or drafts, as a concern when they visited the site. But the Fina had been delivered by then. It was up to Daro, not Lafarge, to ensure the correct environmental conditions just as, as I will come to, it is up to Daro to exclude other causes of the failure in this litigation.

[130] As weather cooled, portable natural gas heaters were used on some of the floors. Witnesses from Lafarge testified that there was more cracking and delaminating where heaters had been placed. Gas heaters can be seen in some photographs where cracking is evident.

[131] The placement of heaters might explain why the problems were discovered in January 2012. It seems unlikely that the delamination all emerged at once; the evidence is only that the problems were first raised by Menkes with Daro in January 2012. But discovery in January, when the weather was cold, humidity was low, and gas heaters were present, suggests that the heaters may have played a part in the performance of the Fina.

[132] Danninger also agreed that Fina should not be poured against unprotected drywall to avoid the drywall absorbing moisture from the screed, causing cracks (but not expansion). He said that this did not happen. However, there were photographs of Fina poured against unprotected drywall, contrary to the directions which required a foam barrier to avoid contact.

Slump adjustments

[133] Daro’s experts did not suggest that the performance of Fina would change if it was installed on the ground floor of a building or the 50th floor, or that Lafarge ought to have tested to see if it would perform differently after it was installed in a high-rise building. Nor did anyone else. However, the challenge in installing Fina at the FSH was that it would lose slump, or flowability, as it was pumped to higher floors. Lafarge did not have pumps or expertise in applying it; that was Daro’s responsibility. Daro had a pump at ground level and another on the 21st floor.

[134] Roppelt said that pumping to high floors caused a 10–20-millimetre loss in slump. To address this, Daro asked Lafarge to increase the slump to 360-380 millimetres flow. This was achieved through the addition of water and superplasticizer by Lafarge at the plant or, if necessary, when the Fina was delivered – usually in consultation with Roppelt.

[135] Delivery occurred at the FSH when Fina was emptied into Daro's pumping system. Prior to accepting delivery, Daro and Lafarge performed a slump flow test. This sometimes led to Lafarge adding more water or superplasticizer to the Fina while still in the truck in order to improve the slump to meet Daro’s needs before Daro pumped the product to the high-rise floors. Daro could reject a load if not satisfied. Between August 28 and October 26, 2011,

which is when the Fina was delivered and installed on the high-rise floors, Daro rejected just one of 56 truckloads of Fina.

Conclusion on causation

[136] The evidence does not satisfy me that the cause of the limited delamination of Fina on the high-rise floors of the FSH was due to a defect in the Fina. In particular, I do not accept the theory that the inclusion of limestone filler was the cause of the problems.

[137] Rather, I find it likely that the delamination was caused by factors that were in the control of Daro and Menkes, including adequate cleaning and priming of the substrate before the Fina was poured, and environmental factors such as exposure to heat, sunlight, drafts and contact with drywall.

Applying the Sale of Goods Act

No affirmative proof of a defect

[138] Daro has failed to prove the Fina was defective. At the FSH, 97% of the Fina did not require any repair. If limestone filler led to delayed hydration and expansion, causing hollow spots, the problem would have been widespread, as limestone was in all the Fina delivered to the FSH. Daro's assertion, and the evidence of its experts, that including limestone in the Fina made it defective is contrary to the performance of the product – at the FSH and elsewhere.

[139] Daro's experts did not conduct tests to support the delayed hydration and expansion theory; their experts conducted limited examinations of the Fina. In contrast, Lafarge and its expert, Dr. Carballosa, conducted tests which did not support expansion, or support the conclusion that limestone ought not to have been included in Fina.

[140] Altmann said limestone should not have been used, but this was not the evidence of Keller, who said that limestone is permitted as a filler. Roppelt did not raise concerns in October 2011 when he acknowledged he knew limestone was in the Fina following the events at 80 Commerce Valley. Lafarge's extensive testing did not raise concerns about delayed hydration and expansion at all – let alone because of the use of limestone filler.

[141] The addition of water and superplasticizer by Lafarge to improve slump for pumping does not support Daro's claim of a defective product either. Daro required and requested the additions to achieve a higher slump. Further, where there was too much water added to Fina, as occurred with the ballroom, the Fina turned powdery and failed almost immediately. This did not happen with the high-rise floors, where the problem was very limited delamination which did not come to light until months after the Fina had been poured.

[142] There is also no evidence that the Fina actually supplied by Lafarge to the FSH project did not comply with the specifications in the contract respecting compressive strength. Although lab results from Lafarge showed some Fina was not achieving the desired compressive strength, Dr. Lotfy and Christine Gilbert were not concerned by the variances, and there is no

evidence that the Fina has failed due to lower compressive strength (if it was lower). Further, this was not complained of or specifically pleaded by Daro.

[143] In short, Daro has not provided affirmative proof and has not satisfied me on a balance of probabilities that the Fina delivered to Daro for installation at the FSH was defective or was not “reasonably fit” for its purpose.

Other probable causes have not been eliminated by Daro

[144] The fact that 97% of the Fina poured at the FSH was fit and did not require repair suggests strongly that there were other causes of the delamination and cracking. Daro’s experts were dismissive of other potential causes or did not consider them at all.

[145] As explained above, Lafarge and its expert, Dr. Carballosa, conducted tests which showed that applying the primer correctly using two coats was critical to ensuring an effective barrier between the Fina and the concrete substrate. Carballosa found that applying only one coat of primer led to a higher likelihood of delamination.

[146] Daro has failed to satisfy me, on a balance of probabilities, that primer was properly and adequately applied. None of the applicators testified and the documentation of the application of primer was very weak. There was no evidence of the adequacy of cleaning the cement in accordance with good practice before the primer was applied, and there was evidence that suggested Fina was poured before the primer had dried, leading to delamination. This was also supported by evidence of outgassing on pieces of Fina which had been removed due to delamination, and which would have resulted from lack of primer, or separation, between the substrate and the screed.

[147] Daro has also not satisfied me on a balance of probabilities that site and environmental factors did not play a part in causing the problems with 3% of the Fina. As I have discussed above, factors to be avoided when installing Fina were present at the FSH, including pouring Fina in direct sunlight, exposure to drafts, failure to separate Fina from drywall, and the use of heaters which were in close proximity to Fina which had delaminated.

[148] In my view, therefore, Daro has failed to meet its burden of eliminating all other potential causes of the delamination of the Fina.

Conclusion on Sale of Goods Act

[149] As Daro has failed to affirmatively prove that the Fina was defective and the cause of the delamination, and it has failed to eliminate all other causes of the delamination, its claim for breach of contract, based on s. 15 of the *Sale of Goods Act*, fails.

Applying the law of negligence

[150] I have found above that the limited delamination of Fina poured on the high-rise portions of the FSH project was not due to a deficiency or flaw in the mix design or manufacture of the Fina by Lafarge. Consequently, Daro cannot meet the fourth requirement of establishing

negligence, as it has not proven that Lafarge caused the damage alleged to have been suffered by Daro. The negligence claim therefore fails. Nevertheless, in the event my findings are incorrect I address issues relevant to negligence below.

Duty of care

[151] It is well accepted, and Lafarge does not challenge, that a manufacturer of a product owes a duty of care to its consumers or customers: *Mustapha*, at para. 6. In this case, in which Lafarge and Daro worked closely in developing Fina, and Lafarge was aware of its use at the FSH, Lafarge owed a duty of care to Daro.

Standard of care

[152] The standard of care imposed on a manufacturer is to “use reasonable care in the circumstances and nothing more”: *Phillips et al. v. Ford Motor Co. of Canada Ltd. et al.*, 1971 CanLII 389 (ON CA) at para. 49. The burden of proof is on the plaintiff, Daro, to show that Lafarge breached this duty to take reasonable care in manufacturing Fina which it supplied to Daro for use at the FSH project.

[153] In my view, Daro has failed to prove, on a balance of probabilities, that Lafarge failed to take reasonable care in developing and manufacturing Fina.

[154] Daro’s position is that the Fina should have undergone more extensive testing before being sold to Daro, especially as the mix design was adjusted during the project. Altmann said that any changes to the mix design would need months of thorough testing. Sparling said that Lafarge appeared to be constantly changing the mix design to get it to work and asserted that Lafarge should have poured 5,000 square feet to ensure it would work.

[155] These assertions are unfounded. Daro and Lafarge both knew they were working with a new product in a new setting. Danninger acknowledged that Fina was still in a development phase in 2011. Further, there were no fundamental changes in the mix design during the FSH project. Rather, the adjustments were in the amounts of water and superplasticizer used, which I was told is common even with well-established products as the manufacturer seeks to optimize each product for the particular project.

[156] The evidence of Dr. Lotfy about the development of Fina, including extensive testing and examination in the Lafarge lab, satisfies me that Lafarge took reasonable care. Dr. Lotfy said he tested 15 types of sand before determining that all sand had to be removed in order to achieve a feather edge. Roppelt suggested cement as a filler instead, but this was not suitable either. As shown in the spreadsheets of testing produced by Lafarge, by March 22, 2011, Dr. Lotfy concluded that limestone worked. Limestone is a CSA-approved substitute for sand.

[157] Dr. Lotfy tested for slump, compressive strength, flexural strength and shrinkage/expansion. He said that Lafarge would intentionally introduce large variations in the water, binder and limestone mix to measure how far they could go before causing segregation of the materials. Lafarge tested for shrinkage and expansion over time and found no expansion and only very slight shrinkage. While Lotfy did not conduct tests to see if there would be

expansion several months after it was poured, there was no evidence, or even suggestion, that Fina would remain static and inert for several months and then suddenly start expanding.

[158] Altmann was critical of the lack of field testing as the mix design was adjusted in the fall of 2012, but the adjustments to Fina delivered to the FSH were relatively minor. The anhydrite binder from the manufacturer, Gyvlon, changed in August 2011 to include some superplasticizer, which was known to and adjusted for by Lafarge. The addition of water or superplasticizer to achieve sufficient slump was not a change in ingredients, and were known to Daro.

[159] The Fina was also installed and performed well at five locations prior to being tested at FSH. All of this supports a finding that Lafarge acted with reasonable care in testing the product.

Conclusion on negligence claim

[160] Daro's claim in negligence also fails.

Duty to warn

[161] Daro also pleaded and argued that Lafarge had a duty to warn Daro of the risks associated with the Fina, including its "suspected failure."

[162] In light of my finding that there was no defect in the product which made it unfit for its intended purpose, nor any risk of harm from its use, Lafarge had no duty to warn: *Hollis v. Dow Corning Corp.*, 1995 CanLII 55 (SCC) at paras. 20-22. In any event, Daro was well aware that the product was new and had worked on its development before seeming to turn the concept over to Lafarge. Daro was the experienced applicator which also sought adjustments to the product in order to ensure slump and flowability.

[163] To the extent that there were any risks associated with using this new product, they were known to both Daro and Lafarge. In *Hollis* at para. 21, the Supreme Court noted that "the duty to warn serves to correct the knowledge imbalance between manufacturers and consumers by alerting consumers to any dangers and allowing them to make informed decisions concerning the safe use of the product." There is no knowledge imbalance here which would give rise to a duty to warn.

[164] Danninger and Roppelt knew they were dealing with a new product, still under development. They had developed this product with Lafarge. They also knew that they were applying it in a new setting, which required sufficient slump to pump it up dozens of floors and place it on properly prepared cement slabs in a high-rise construction project with many environmental factors present that could affect the performance of the product. Lafarge had no reason to think that Fina would not perform well, as it had on at least five previous applications. Nor did its testing raise concerns giving rise to a duty to warn.

[165] There is also no apt comparison between this case and the findings relied on by Daro in *Alie v. Bertrand & Frère Construction Co.*, 2000 CarswellOnt 5075, [2000] O.J. No. 1360,

[2000] O.J. No. 1361 (S.C.J.), reversed in part, 2002 CarswellOnt 4255 (Ont. C.A.). In that case, the use of fly ash by Lafarge was new, it was defective, and the purchasers were not made aware of the risk of using the new material.

[166] The claim for a breach of a duty to warn therefore fails.

Defamation

[167] Daro pleads that Lafarge defamed it by telling others that Daro was at fault for the problems that arose at the FSH project. In the Counterclaim, Daro specifically pleads that defamatory statements were made by Christine Gilbert to contractors at two sites in the summer of 2012, and to Michelle Warton, an employee of True Flooring on four occasions between June and August 2012. The gist of those statements, it was alleged, was that DaroTopp and DaroTopp XS were defective, and that the problems at the FSH were due to Daro's product and its incompetence.

[168] Daro has failed to prove that any such defamatory statements were made.

[169] Daro quoted Kevin Savoia, of True-Level Floor Systems Inc. in British Columbia, who sent an email to Danninger in November 2012 explaining that a customer had "a change of heart and decided to go with another manufacturer" because "they heard there was a problem with the materials and wouldn't comment further."

[170] Kevin Savoia's evidence went no further than his email. He simply said there was "bad press" about the FSH project, that people had heard about a project in Toronto and did not want to take a risk on the project. Savoia said that "news travels superfast in the construction industry"; however, he provided no evidence that Lafarge said anything to anyone about the FSH project, or about Daro. Savoia said, as he agreed at trial, that he was "not sure exactly what happened."

[171] Aside from Savoia's assertion that "news travels fast", there is limited evidence that information about the problems at the FSH spread at all. When Fabrice Forte, Floor Solutions' principal, was asked about industry chatter concerning the FSH failure, he said that "it was mentioned", but did not say that Lafarge blamed Daro.

[172] Similarly, a letter and emails from two Daro customers that were relied on by Danninger simply referred to Daro's screed having a "poor reputation" due to the cracking and delamination at the FSH project, and pointed to two contracts that may have been lost. This is hearsay and does not, in any event, suggest that Lafarge was blaming Daro.

[173] Lloyd Keller, who at the time was Director R&D/Quality Assurance for EllisDon Construction in Toronto and a member of several construction oversight councils, testified that he was unaware of any topping failure at the FSH prior to being asked to prepare his report many years later.

[174] Michelle Warton worked for Daro from 2010 until April or May 2012 as a sales and marketing representative. According to Danninger, she was laid off after the FSH project.

Warton then joined a company called True Flooring, which was interested in installing screed for Lafarge.

[175] Warton attended an applicator training session at Innocon in 2012, where she said there was a lot of talk about how Daro had “screwed up” the FSH project. Warton also said she met with Christine Gilbert who told her that the FSH was “Daro’s fault.” Warton also referred to attending a Lafarge pour in Zephyr, Ontario, at which Gilbert was present. Warton said there was more talk of Daro at this pour, but could only say that Gilbert had told people that Lafarge had parted ways with Daro because of problems with the FSH project.

[176] Gilbert did not recall making any of the statements attributed to her by Warton. She recalled two meetings with Warton where Gilbert said she had the impression that Warton was trying to get her to say negative things about Daro.

[177] I have no difficulty preferring Gilbert’s testimony over Warton’s evidence. Warton was not a compelling witness. Her evidence was vague about what was said and by whom. She had no background in construction yet presented herself as being very knowledgeable about screed. She portrayed herself as an important hire for True Flooring because of her knowledge of the product but did not stay there long and then left the industry. Warton was critical of Gilbert and others at Lafarge and Innocon, suggesting that they didn’t seem to know much about the product or how to apply it and that she was the expert.

[178] Gilbert, on the other hand, who is no longer employed by Lafarge, was clear and articulate in her responses, had an appropriate recollection of events from a decade earlier and was not challenged on this issue in cross-examination.

[179] In any event, even if Gilbert had told Warton that the problems at the Four Seasons were Daro’s fault, Warton said she did not believe her, and so no reputational harm to Daro would have flowed from that statement.

[180] Danninger testified that Menkes did not use Daro again, and claims business losses from the failure of Menkes and other large contractors who did not hire Daro. But neither Danninger nor anyone else from Daro could point to any defamatory statements made by Lafarge. Daro simply asserts that “there can be no doubt” that Lafarge “would have denied liability” to Menkes, and that Lafarge, “to save their reputation... would have made it known in the industry that the fiasco at Four Seasons was not their fault, but Daro’s”, which “irreparably harmed” Daro’s reputation.

[181] The tort of defamation does not arise from rumours, assumptions or assertions. The claimant does not have to prove very much to meet its burden of proof in a defamation action, but the claimant is required to at least lead evidence that statements were in fact made by the defendant to third parties which could harm the reputation of the claimant. Once that is established, the defendant can avoid liability by demonstrating that the statements were true, or were honest opinion based on facts on a matter of public interest, or were statements made on an occasion of privilege: *Grant v. Torstar Corp.*, 2009 SCC 61, [2009] 3 S.C.R. 640 at paras. 28-34.

[182] In this case, Daro has failed to establish, on a balance of probabilities, that Lafarge or its employees made any defamatory statements whatsoever about Daro. Accordingly, it is unnecessary for me to address defences raised by Lafarge. However, in light of my conclusion on causation, it strikes me that Lafarge may have viable defences of truth, fair comment and qualified privilege if it had told others that the problems at the FSH were Daro's fault.

[183] The claim for defamation fails.

Damages and remoteness

[184] In light of my findings on liability, Daro is not entitled to any damages. However, as I heard evidence on damages, in the event that I am incorrect with respect to liability I address damages below.

Intact's claim

[185] Intact reimbursed Daro for its claim for the cost of repairs and remedial work completed in 2012 in the amount of \$243,438.89. Daro's evidence was that Intact had paid it in full for the remedial work. This amount was pursued on behalf of Intact as a subrogated claim in this action, through Daro's Counterclaim.

[186] On the day before trial, however, Intact signed an "Assignment and Transfer" of rights in its claim to Daro "for consideration." When asked about this in cross-examination, Danninger said that Daro had paid Intact two dollars.

[187] Lafarge notes that if Daro is successful, this would result in a double recovery windfall to Daro. Lafarge submits that the Assignment amounts to forbidden maintenance and chaperty. I agree.

[188] While there are many circumstances in which a claim or cause of action can be lawfully assigned, the overriding question is "whether the assignment can fairly be seen as prompted by a desire to advance the cause of justice rather than as intermeddling for some collateral reason": *Fredrickson v. Insurance Corp. of British Columbia* (1986), 28 D.L.R. (4th) 414 (B.C.C.A.) affirmed, [1988] 1 S.C.R. 1089, quoted in *2770095 Ontario Inc. v. Morgan*, 2023 ONSC 1924, at para. 50. As McLachlin J.A. (as she then was) noted in *Fredrickson*, the court must consider "whether the assignee possessed the requisite financial interest at the time of the assignment."

[189] Unlike in *Fredrickson*, Daro has no financial interest in Intact's claim as Intact has already paid Daro. Daro does not seek this amount to "advance justice" and reimburse Intact, but to obtain a windfall. The result of the Assignment is that Daro is "meddling" in and pursuing a cause of action in which it has no interest.

[190] Accordingly, even if I had found that Lafarge was liable for breach of contract or negligence, I would dismiss what is now Daro's claim for repair and remediation costs – costs it has already recovered.

Special damages

[191] Daro claims other specific, or special, damages as follows:

- (1) Remediation costs for time spent by Danninger and Roppelt not covered by Intact in the amount of \$31,200.00;
- (2) \$225,566.95 paid to Lafarge for the Fina delivered to the FSH;
- (3) Costs of investigation paid to Sparling, Huenger and Altmann totalling \$14,036.78; and
- (4) The increase in insurance premiums for 2013, 2014 and 2015 after Intact refused to continue to insure Daro.

Daro's remediation costs

[192] Daro pleads that it incurred costs arising from the remediation that were not reimbursed by Intact. In particular, it seeks compensation for the time the principals, Danninger and Roppelt, had to spend overseeing the remediation, which it did not claim from Intact.

[193] On the evidence before me, I am not satisfied that Daro has proven what amount should be reimbursed, if any, for the time spent by Danninger and Roppelt. No timesheets were produced to support these claims and I have no reliable basis to make any award.

[194] Further, the amount claimed has varied. In his testimony, Danninger said their time was worth about \$80,000.00 to \$85,000.00 but provided no details supporting this amount. Daro's Schedule of Damages attached to its closing submissions seeks \$31,200.00. The Schedule states that Danninger spent "40 hours per month from February to July at \$65.00 per hour" for a total of \$15,600.00, and that Roppelt spent "40 hours per month from February to July at \$65.00 per hour" for a total of \$15,600.00. No evidence was presented to support these figures either.

[195] Accordingly, I would make no award of damages for time spent by Danninger and Roppelt on remediation.

Money paid to Lafarge for the Fina

[196] Daro has established that it paid Lafarge \$225,566.95 for Fina delivered to the FSH. Had Daro succeeded on liability, however, to order return of this amount would be a windfall to Daro just like receiving the Intact claim would be a windfall.

[197] Daro was paid by Menkes for the installation of the Fina which would have included the cost of the Fina Daro purchased from Lafarge. Having been reimbursed for the cost of repairs by Intact, Daro likely made its expected profit on the FSH project. No damages are required to put Daro in the position it would have been in if the contract, or contracts, were performed, as the contracts were performed.

[198] Accordingly, I make no award of damages for the amounts paid to Lafarge.

Costs of investigation

[199] Daro has produced invoices showing that it incurred \$14,036.78 in costs to investigate the failure in 2012. These included payments to Dr. Huenger and Mr. Altmann, and to Giffen Koerth, which was the company which employed Mr. Sparling at that time. There was also a large courier charge relating to delivering a sample to Mr. Altmann. These amounts are not disputed and relate to investigation soon after the issues came to light which, in my view, would properly be awarded to Daro as special damages, together with pre- and post-judgment interest.

Increased cost of insurance

[200] Daro pleads that it was unable to renew its insurance policy with Intact following the FSH claim and had to buy more expensive insurance from another company, which cost about \$20,000.00 more per year. It seeks the increased cost of that insurance for three years.

[201] Daro relies on a letter from its broker, Oxford Insurance Group Ltd., dated April 18, 2013, stating that Intact's reason for non-renewal was "due to claims." The letter refers to "losses" of \$247,993.99 relating to the FSH, and another claim made May 31, 2012, of \$76,084.00. According to Danninger, the second claim related to clogged drainage pipes which had to be replaced, which had nothing to do with FSH.

[202] Daro called a witness from Intact to prove the subrogated claim that was ultimately assigned to Daro. However, I heard no evidence from her that the FSH claim was the sole reason for the non-renewal by Intact. Moreover, the only evidence on this issue is weak hearsay: a letter (tendered by Danninger) from someone at Oxford (who did not testify) relaying something she was told by someone at Intact (who also did not testify). Danninger agreed when cross-examined on the Oxford letter that the non-renewal was due to both claims, and not solely a result of the FSH claim. This is inadequate to establish, on a balance of probabilities, that the FSH claim was the reason for the non-renewal and increased costs of insurance incurred subsequently by Daro.

[203] Accordingly, even if I had found fault on Lafarge, the claim for additional insurance costs would be dismissed.

General damages for lost profit and harm to reputation

[204] Daro seeks general damages for lost profit for three years, and for harm to its reputation.

[205] I have found no evidence that Lafarge defamed Daro. Furthermore, while there is some evidence that some people or companies did not wish to work with Daro due to what had happened at the FSH project, I have no information as to what others may have said which might, or might not, have been defamatory of Daro. Rather than Daro's reputation taking a blow, it seems just as likely, if not more likely, that the business decision not to use Fina arose from the fact that it is a new product on which contractors were not prepared to take a risk. As

I heard at the trial, the construction industry is well known to be risk averse. Accordingly, I would not award any damages for loss of reputation.

[206] Daro’s claim is better understood as a claim for consequential damages arising from Lafarge’s alleged breach of contract and negligence in supplying defective Fina, snuffing out an anticipated growth in its use over several years, which would have been profitable to Daro.

[207] The parties agree that if Lafarge is liable in contract or tort, Daro can claim damages relating to lost profit and lost opportunities, subject to remoteness. As McLachlin J.A. (as she then was) stated in *Houweling Nurseries Ltd. v. Fisons Western Corp.*, [1988 CanLII 186 \(BC CA\)](#), [1988] B.C.J. No. 306, 49 D.L.R. (4th) 205 (C.A.), leave to appeal to S.C.C. refused (1988), 89 N.R. 398n at or the British Columbia Court of Appeal, stated at p. 210 D.L.R.:

The basic rule is that damages for lost profits, like all damages for breach of contract, must be proven on a balance of probabilities. Where it is shown with some degree of certainty that a specific contract was lost as a result of the breach, with a consequent loss of profit, that sum should be awarded. However, damages may also be awarded for loss of more conjectural profits, where the evidence demonstrates the possibility that contracts have been lost because of the breach, and also establishes that it is probable that some of these possible contracts would have materialized, had the breach not occurred. In such a case, the court should make a moderate award, recognizing that some of the contracts may not have materialized had there been no breach.

[208] This passage was adopted by the Ontario Court of Appeal in *Magnussen Furniture Inc. v. Mylex Limited*, 2008 ONCA 186 at para. 79. As was observed by the Court in *Magnussen* at para. 77, citing *Canlin Ltd. v. Thiokol Fibres Canada Ltd.* (1983), [1983 CanLII 1603 \(ON CA\)](#), 40 O.R. (2d) 687, [1983] O.J. No. 2502 (C.A.), “an assessment of future loss of profits must, of necessity, be an estimate.” As Cory J.A. (as he then was) continued in *Canlin* at p. 695:

The amount of future profits and the period for which they should be allowed will depend upon the facts of each individual case. Although such damages may be difficult to assess, it must be remembered that they arise as a result of the breach of the defendant and the court should make all reasonable efforts to assess those damages.

[209] In this case, what happened at the FSH project had an impact on future contracts. Witnesses testified to a keen interest in screed, including Fina, going cold following word of the delamination problems. The expectation of profit was also seen by subcontractors such as Floor Solutions and True-Flooring, whose opportunities and interest waned as a result.

[210] In anticipation of continued growth, Daro had entered into a Letter of Intent (“LOI”) with Floor Solutions, which had applied Fina at many locations for Daro including the FSH project, in which Floor Solutions would be Daro’s “Master Applicator” with minimum volumes of 3 million square feet in 2012 rising to 6 million square feet in 2015.

- [211] Fabrice Forte, the principal of Floor Solutions, testified that he signed the LOI to have “some exclusivity” as screed was “a game changer” for his company. He said they were already exceeding the targets in the LOI. However, in March 2012 Floor Solutions revoked the LOI. Mr. Forte wrote Danninger explaining that “after the problems at Four Seasons I cannot take the chance of failure.” At the trial, Forte referred specifically to the problem with delamination at the FSH. Forte testified that contractors with projects where he had expected to use Fina changed their minds; in particular, a project on Tweedsmuir Avenue for PCL, a large construction company, in 2012. In cross-examination, Forte agreed that there were no guarantees of the level of sales anticipated in the LOI.
- [212] Kevin Savoia, who had incorporated True-Level Floor Systems Inc. in British Columbia because of his excitement for the potential growth of the screed business with Daro, effectively shut down after 2012 following the loss of confidence in screed products, he said, due to the news about the FSH failure. Savoia’s business, however, had yet to get off the ground.
- [213] The expectation of considerable growth in the screed market was also anticipated by Lafarge in its proposed Agreement with Daro prepared in 2010.
- [214] Earlier, on September 1, 2008, Daro and Lafarge had entered into an Agreement whereby Lafarge would manufacture Agilia Screed A and Daro would be the applicator. The Agreement expired on December 31, 2010, but the parties worked well together, developing the screed business and continued to collaborate through 2011, installing Screed A in many locations as well as several Fina applications.
- [215] In August and September 2010, Lambros and Danninger exchanged correspondence regarding a new agreement between Lafarge and Daro which would last until August 31, 2015. Lafarge’s proposal anticipated significant growth in the anhydrite screed market over the course of the Agreement – a volume of 10,000 cubic metres by year 2, 15,000 cubic metres by year 3, 22,000 cubic metres by year 4 and 30,000 cubic metres at year 5. Daro’s counterproposal was less aggressive, 5,000 cubic metres by year 2, 10,000 cubic metres by year 3, 15,000 cubic metres by year 4 and 20,000 cubic metres at year 5. Danninger thought the lower numbers were “doable.” However, Danninger said that Lambros did not like the smaller numbers, and so, after consulting with Roppelt, Daro agreed to the larger numbers.
- [216] No Agreement was ever executed. The exchange of drafts contained, from the outset the signature of Jean Mascaro, the “VP/GM” of Lafarge Ready Mix in Eastern Canada. However, this was because Lafarge was working from the previous Agreement signed by Mascaro. As Lambros testified, he was using a “template.” Although Danninger may have signed back counterproposals, nothing was executed by Lafarge, nor did Lafarge present a draft as an irrevocable offer that could be accepted by Daro. Furthermore, there are many emails between Danninger and Lambros and Mascaro in the fall of 2011 which support the conclusion that no written Agreement was ever finalized. Danninger admitted as much in cross-examination, and Lambros’s evidence was very clear on this issue.
- [217] In short, the market for screed had been growing and, especially with the introduction of Fina, this was expected to continue. Daro had been training applicators in Eastern Canada in

anticipation of more growth, and this expectation was shared by others, such as Forte, Savoia and Lafarge itself. Daro was also in discussions about expansion into the market in the United States as well.

[218] Daro pointed to some anticipated contracts that did not proceed following the FSH. It also did not get any new work from Menkes. I agree that news of the failure of the FSH project led to reduced growth and profit that Daro reasonably expected to achieve. Danninger said that in 2012 sales dropped “drastically”, and it took until 2015 to recover to the same level of business Daro had in 2011.

[219] Perhaps in light of *Magnussen*, where the trial judge assessed damages for lost profit for a two-year period (rejecting the plaintiff’s claim for seven years), Daro has limited its claim to three years through to the end of 2015. In fact, the estimates and claims include losses in 2012 as well, so Daro is really claiming four years of losses.

[220] Marnie Silver provided expert opinion evidence on economic losses for Daro. She observed that Daro’s sales revenue in 2010 and 2011 was \$2.2M and \$2.0M, respectively. However, in 2012 sales revenue dropped to about \$730,000.00, and then increased to \$795,000 in 2013, \$1.43M in 2014 and \$3.489M in 2015. The profit margin in those years ranged between about 29% (in 2012) and 37% (in 2014).

[221] Silver’s estimate of damages was based on, among other things, the assumption that the minimum volumes in the draft Agreement with Lafarge would have been achieved and the LOI with Floor Solutions would have applied. She also prepared an alternative estimate based on the lower volumes proposed by Daro to Lafarge.

[222] Silver’s calculations, based on Lafarge’s projections, would have seen sales revenue jump to over \$15M in 2012 and rise to over \$47M by 2015. Even on the alternate estimate, sales revenue would have more than tripled in 2012 from 2011 to over \$7.5M, and risen to over \$31M in 2015. After inputting costs and applying a profit margin of 33.25%, Silver’s two estimates of losses for four years were: (1) \$29,700,000.00 and (2) \$15,796,000.00.

[223] In my view, these amounts are too high; not because of any flaw in Ms. Silver’s work, but because of the assumption that either level of volume would be achieved. These volumes were highly aspirational and optimistic. No compelling evidence was presented that the market for screed was going to jump three-fold, let alone seven-fold in 2012 from 2011. Danninger himself expressed concerns as to how such a demand could be met when he received the proposal from Lambros in 2010.

[224] Screed was still a relatively novel and expensive product in Canada in 2011 and 2012. Fina was particularly novel – unique internationally, I was told. The construction industry is conservative and risk averse. While there were several prospective contracts to apply Fina, none were finalized, and none were cancelled, unlike the situation in *Magnussen*.

[225] Further, it seems Lafarge continued to attempt to market Fina, and presumably would have continued to install screed if there was a demand for it. However, I have no information as to what sales, if any, Lafarge achieved during the next few years. Nor do I have any information

about the market for screed during this time, or at any time since the events of 2011 and early 2012. If it was to be such a profitable and in-demand product, one would expect to have information on the market for it and those who were supplying it. Accordingly, it is difficult to quantify what profits might have been achieved.

[226] Lafarge did not present any expert evidence on damages. In argument, counsel for Lafarge submitted that any award should be nominal. It noted that Daro was paid in full for the FSH project and that Daro could point to no binding contracts that were broken as a result of the FSH events. Lafarge emphasized that screed, and Fina in particular, was a new product, making an estimate even more difficult. Recognizing that Daro did see a loss in income over the next few years, Lafarge submitted that perhaps \$200,000 (\$100,000 for two years) might be an appropriate award.

[227] Lafarge's position is too low. At the very least, one would expect that, but for the FSH problems, Daro would have at least maintained the level of sales revenue it had achieved in 2010 and 2011 of \$2M per year, and likely seen modest increases each year. As noted, by 2015 Daro's sales revenue had recovered and increased to \$3.489M. Daro's experience since its establishment in 2006 was one of slow but relatively steady growth in sales. In my view, had the FSH event not occurred, Daro would likely have continued to grow gradually as the market for screed, including Fina, developed.

[228] A reasonable rate of growth in sales might be \$500,000 per year. This would have seen Daro's sales revenue increase from a base of \$2M in 2011, to \$2.5M in 2012, \$3M in 2013 and \$3.5M in 2014. Applying this assumption, and considering Daro's actual sales revenue in each year, the difference in revenue in each of these years was as follows:

- For 2012, \$1.77M (\$2.5M less \$730,000 actual);
- For 2013, \$2.205M (\$3M less \$795,000 actual); and
- For 2014, \$2.07M (\$3.5M less \$1.43M actual).

[229] These amounts total \$6.045M in lost sales revenue. Applying Ms. Silver's profit rate on sales of 33.25%, which I find to be reasonable, results in lost profit of \$2,009,962.50. Had I found for Daro, I would have awarded damages in this amount, \$2,009,962.50 plus pre- and post-judgment interest. I would not have awarded damages for 2015. Fixing damages in this way is somewhat speculative, as was recognized by Justice Cory in *Canlin*, and any award should be "moderate" as recognized by Justice McLachlin in *Houweling Nurseries*. In my view, this sum is a moderate but realistic amount in the circumstances.

Conclusion on damages

[230] In conclusion, had I found for Daro, I would have awarded special damages of \$14,036.78, for the costs of investigating the failure, and general damages of \$2,009,962.50, plus pre- and post-judgment interest.

Conclusion

[231] The action by Lafarge was discontinued at the outset of the trial. Daro's Counterclaim is dismissed. If the parties cannot agree on costs within 30 days of the release of these Reasons, they may arrange a case conference with me to determine how costs will be addressed.

Paul B. Schabas J.

Date: December 19, 2024