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THE AMERICAN EXPERIENCE WITH EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS) OR SYNTHETIC STUCCO CLADDING SYSTEMS

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I. ORIGINS

Exterior insulation and finish systems (“EIFS”) were developed shortly after the Second World War to aid in the reconstruction of European cities ravaged by the war.² The use of EIFS to repair European buildings worked quite well, as it was an efficient and economical alternative to demolishing damaged structures and building anew. Moreover, the use of EIFS on Old World buildings did not create many problems, as most of these structures were constructed of stone, concrete, brick or other similar, durable materials. In the 1960s, EIFS was introduced into North America. It was first used on commercial structures. Later, however, it began to be employed on wood-frame buildings, such as are commonly found in the residential construction market. It has been the use of EIFS on wood-frame buildings that has generated the most controversy.

II. WHAT IS EIFS?

EIFS is a “system”, not a single product. In this regard, it resembles the many “built-up” roof systems on the market. Depending upon how one counts the various components, EIFS consists of:

- (1) an attachment system (which can be either an adhesive or some form of mechanical anchor);
- (2) an insulation layer (usually consisting of pre-formed boards of foam plastic);
- (3) a base coat (a water-resistant polymer and cement coating that is applied to the top of the insulation);
- (4) a reinforcing mesh that is placed into the base coat (usually made of fibreglass); and

¹ Portions of this article will appear in *Bruner & O'Connor on Construction Law* (West Group).

² Pronounced “EEFS”, or sometimes “EEIFS,” these systems also are referred to as “synthetic stucco”, although not all synthetic stucco systems are necessarily EIFS. For example, applying a synthetic stucco product over an existing exterior cladding system would not constitute a traditional EIFS arrangement. EIFS can also go by other names, including “artificial stucco” or the name product of the largest manufacturer of EIFS, “Dryvit”. See Robert G Thomas, Jr, *EIFS Home Owner's Guide* (2001), available at www.eifs.com.

- (5) a finish coat (typically using acrylic co-polymer technology that is textured to look like stucco and coloured in any number of shades).³

EIFS has the advantage of being an attractive and relatively inexpensive cladding.⁴ In contrast to traditional stucco, which is a “natural” product composed of sand, Portland cement and other materials, EIFS is a synthetic product which has an insulating capability. Moreover, unlike stucco, EIFS can be applied in large areas without any joints, and comes in a variety of shapes, colours, and textures.⁵

III. THE TROUBLE WITH EIFS

1. Moisture infiltration concerns

For all its strengths, EIFS has been the subject of much controversy and litigation.⁶ Most of the controversy centres on moisture intrusion. Most

³ Literature and court decisions discussing EIFS sometimes employ different terminology and descriptions. For example, the substrate to which the EIFS is applied (in wood-framed construction, this is usually either plywood or a gypsum material) is sometimes included as part of the system, although technically this is incorrect. See *Mahviv. Stanley Builders*, 2005 WL 3366973 *1 (Ohio Ct App 11 Dist, 9 Dec 2005): “An EIFS generally consists of a substrate made from either plywood and or other materials, such as gypsum board, which are glued together with polystyrene insulation boards, known as EPS boards. This substrate is then followed by a base coat generally consisting of sand, quartz or marble dust, combined with synthetic bonding agents and/or resins, over which fiberglass netting is embedded. Generally, a primer coat is then applied, followed by an acrylic-based exterior finish coat, which is available in a variety of colors.” As most judicial decisions go, this description is quite complete and, except for the fact that it includes the substrate as part of the EIFS, is more helpful than most. For a thorough discussion of how EIFS is constructed and applied in the field, see Robert G Thomas, Jr, *op. cit.*, n. 2.

⁴ See David L Grenier and William J Jorgensen, “*Exterior Insulation and Finish Systems (EIFS): An Overview*”, available at www.c-risk.com (“Today, EIFS is characterized as a waterproof system that is light weight, inexpensive, and very flexible. Architects applaud its ability to adhere to ornate design. Builders appreciate that it is feather weight and easy to apply. Homeowners approve of its price.”)

⁵ Determining whether a particular structure is clad with traditional stucco or EIFS is not easy to do: “A quick, but not foolproof way to check is to knock on the wall with your knuckles and press on it with your fingers. If you hear a hollow sound when you knock and the wall feels softer than concrete you probably have EIFS. If the wall sounds very solid and feels as hard as concrete you may have traditional ‘hard coat’ stucco.” [eifsfacts.org](http://www.eifsfacts.org) at <http://www.hadd.com/eifs/basics.htm>.

It is also not easy to tell one manufacturer’s EIFS from another’s: “Although EIFS are proprietary products, there are many similarities, and differences, in the way they are installed. In order to know how a given EIFS should have been installed, you need to know whose product it is. Most EIFS, once installed, are indistinguishable, but you will need to know whose product it is in order for the Manufacturer to be willing to help you; Ford dealers don’t fix Chevies. Local EIFS distributors and contractors can sometime [*sic*] help you determine whose product it is. You should be aware that while it is technically possible to take samples of an EIFS and have it analyzed in a lab to determine whose product it is, this is an expensive proposition, requiring cooperation with EIFS Manufacturers, and is sometimes inconclusive.” Robert G Thomas, Jr, *op. cit.* n. 2, at 17.

There are more than a dozen EIFS manufacturers. Some of the more common ones include Dryvit (www.dryvit.com); Finestone (www.degussa.com); Omega Products (www.omega-products.com); Master Wall (www.masterwall.com); Preswitt (www.preswitt.com); Senergy (www.degussa.com); Sto (www.stocorp.com); TEC (www.hbfuller.com); TEIFS Wall Systems (www.teifs.com); Parex (www.parex.com); Stuco-Flex (www.stucoflex.com); and Pleko (www.pleko.com). The EIFS industry is represented by a number of trade associations, including EIFS Industry Members Association, or EIMA (www.eifsfacts.com); Association of Wall & Ceiling Industries, or AWCI (www.awci.org); Northwest Wall & Ceiling Bureau (www.nwcb.org); and Texas Lath & Plaster Contractors Association (www.tlpc.org).

⁶ As one commentator, interested in determining whether EIFS-clad homes were discounted in the market place (and finding that they were not), noted: “Numerous class action suits have been filed on

EIFS is a barrier system which is intended to keep water out.⁷ If, however, water penetrates into the interior of the system, it is often unable to escape and can result in damage to the substrate and other interior wall materials.⁸ In some cases, the moisture intrusion and resulting deterioration of interior wall components can produce an environment conducive to mould growth.⁹

behalf of EIFS homeowners against EIFS manufacturers and installers. Not surprisingly, manufacturers blame installers for the problems, while contractors say the manufacturers have produced a defective product. North Carolina has recently banned the use of EIFS in residential buildings and Georgia may soon implement similar restrictions. Equally disturbing for homeowners is that many insurance companies will not cover damage due to EIFS systems." Leonard V Zumpano *et al.*, *A Report on Exterior Insulation and Finish Systems: What Real Estate Professionals Need to Know*, Alabama State Research and Education Center (February 2000). See also, Kenneth H Johnson *et al.*, "Exterior Insulation and Finish Systems: The Effect on Residential Housing Prices and Marketing Time", *J of Real Estate Research*, 12 (2001) (authors report that market is not discounting EIFS-clad homes, but the presence of EIFS significantly extends the property's marketing time).

⁷ As described by the National Association of Home Builders: "This type of system is called a *face sealed barrier EIFS* and resists water penetration at its outer surface. It is not intended to drain water that gets behind it. It differs from other types of cladding that have a weather resistive barrier behind the cladding (tar paper or house wrap, and/or it may have air spaces between the cladding and substrate. There are many types of cladding materials that look like stucco. Traditional stucco is made of cement and is different than EIFS cladding . . . Other types of 'hybrid' stucco include polymer/cement base coat directly applied to a substrate, or traditional stucco with an acrylic finish coat." National Association of Home Builders, *EIFS Facts: Commonly Called Synthetic Stucco*, www.nahb.org (emphasis in original).

Since about the mid-1990s, there have been "drainable" EIFS products on the market: "Drainage EIFS were introduced in the mid-90s, and are currently used mostly on wood-framed buildings. It is required by code in some localities. Drainage EIFS walls incorporate a means to handle water that gets past the outside face of the EIFS. This capability usually has some type of secondary water barrier outboard of the wall's framing, and a drainage cavity between the EIFS insulation and the wall framing. Some drainage systems create the cavity using vertical slots on the back of the insulation. Others use a spacer between the insulation and the water barrier, or even simply create a cavity between a trowel-on water barrier and the insulation, by using the EIFS adhesive. Barrier EIFS are simpler and easier to install than drainage EIFS. Hence they are less expensive. The two types of EIFS look virtually identical once installed. It is not possible to convert an existing barrier EIFS to a drainage EIFS." Robert G Thomas, Jr, *op. cit.* n. 2 at 3.

Some commentators note that, while drainable EIFS handle moisture intrusion better than barrier EIFS, these newer systems can still have trouble shedding water: "All exterior walls have moisture within them. There are acceptable levels and there are drainage or drying processes built into most systems. Once water gets behind the EIFS, it has great difficulty escaping, even through weeps or other integrated drainage methods." David L Grenier and William J Jorgensen, *op. cit.* n. 4.

⁸ As one commentator noted: "There are two major problems with EIFS clad homes. If water penetrates an EIFS home, usually near windows, doors, chimneys or other joints, it can become trapped because EIFS is impermeable to water. The trapped moisture then begins to rot wood sheathing and framing and support members, which can then result in significant repair costs. Therefore, it is critical that EIFS homes be inspected for excessive moisture and that their windows, doors, and joints be properly sealed and caulked to prevent future water penetration. There is also considerable evidence of an increased likelihood of termite infestations in EIFS clad homes. If EIFS is in contact with the ground, it apparently attracts and allows easy entry of termites. It is now standard practice for both EIFS manufacturers and inspection companies to recommend a minimum distance of six to nine inches between the EIFS cladding product and the surface of the ground. Unfortunately, in both the above situations (excessive moisture and termites), the damage is usually not readily apparent until it is far along and extensive. Ken H Johnson *et al.*, *op. cit.* n. 6, at 290–291. See also, J A Kilpatrick *et al.*, "The Performance of Exterior Insulation Finish Systems and Property Value", *The Appraisal Journal* (January 1999).

⁹ Determining the causes of mould growth and, worse yet, who might be responsible, can be a notoriously difficult process. For example, with respect to wall construction, such items as choice of interior wall finishes can be important: "Interior finish selection is a critical consideration, especially in humid climate design. The contribution of the interior finish to severe moisture and mold problems in

It is rarely the case that the EIFS components themselves fail, resulting in moisture infiltration.¹⁰ Rather, it is where the EIFS interfaces with other building components, such as windows, doors, decks and roofs, that the real problem lies. The caulking or sealant applied at these locations may be inadequate, or fail over time, allowing moisture to penetrate into the interior of the wall system.¹¹

existing and new buildings is well documented. Using an impermeable interior finish without full consideration of infiltration, outdoor dewpoint temperatures, and the possibility of condensation at the primary vapor retarder location will often result in moisture entrapment and mold problems. Vinyl wall covering is a commonly used interior finish and normally has a low permeance (or a very high resistance) to water vapor migration through a wall system. A problem can develop, however, in hot, humid climates when outside air infiltrates a wall cavity, contacts a cooler surface, condenses, and cannot dry. (The vinyl wall covering's high vapor retarder characteristics prevents the condensation from drying.) The condensation will degrade the finished substrate, usually gypsum board, providing an excellent growth medium for mold. Consequently, vinyl wall covering should be limited to areas where moist air is unlikely to infiltrate (that is, interior walls) or in buildings where positive building pressurization can be ensured. In cold climates the use of vinyl wall covering is not a problem and will, in fact, retard the unwanted diffusion of warm moist air into the wall cavity where condensation can occur in the exterior side of the thermal insulation. In general, in hot, humid climates the permeance of the interior finish material should be significantly higher than the permeance of other components in the wall system. This difference will allow moisture vapor that enters the wall system to migrate into the conditioned space, where the vapor eventually will be removed by the AC system. To ensure success, all portions of the wall system located inwardly from thermal insulation must be more permeable than components external to the thermal insulation. Again, the reverse of this condition is advised in cold climates where moisture should not be trapped inside the cavity on the exterior of the thermal insulation." J David Odom and George H DuBose, *Preventing Moisture and Mold Problems in Hot, Humid Climates: Design and Construction Guidelines* (2003) at 2-12 and 2-13. A recent report suggests that physical defects in buildings play a far smaller role than other factors (work stress, long hours, unsupportive management) in manifesting ailments associated with sick building syndrome: A F Marmot, et al., "Building Health: An Epidemiological study of 'Sick Building Syndrome' ", *Whitehall II Study, Occupational and Environmental Medicine*, 63: 283-289 (Apr 2006).

¹⁰ See National Association of Home Builders, *op. cit.* n. 7: "Interfaces between EIFS and dissimilar materials are a common source of water intrusion, not the EIFS lamina (base coat and finish coat). The most frequent source of water intrusion is windows. Water frequently enters the EIFS at window locations in two ways: Either through the joint around the perimeter of the window or through seams and joints in the window construction itself. Large quantities of water resulting in some of the most severe damage have frequently been discovered entering behind where a roof meets and terminates at the lower edge of a wall. Other potential sources of water intrusion are chimneys, decks, and any other penetration of the EIFS lamina . . . Although the likelihood of penetration through the lamina is remote, water can enter the system through cracks in the lamina."

Another commentator identified major sources of water or moisture infiltration in EIFS as follows: (1) sealant has come to the end of its life; (2) sealant has become de-bonded from the EIFS; (3) the sealant itself is defective (production defect); (4) flashings were improperly designed and/or installed; (5) EIFS-to-window not properly sealed, or not at all; (6) windows themselves leak; (7) window weep holes are plugged; (8) surface mounted objects are not properly sealed; (9) penetrations through the EIFS are not properly sealed; (10) EIFS itself is porous. Robert G Thomas, Jr, *op. cit.* n. 2, at 20.

Where moisture does penetrate the EIFS itself, it is usually due to cracks in the lamina ("lamina" is the term used to denote the base coat and finish coat). There are many reasons why EIFS lamina may crack, including: (1) reinforcing mesh is not present at all; (2) reinforcing mesh is not lapped at the crack location; (3) gaps exist between ends of insulation boards; (4) adhesive exists between ends of insulation boards; (5) a joint is not present where one should be; (6) the wall flexes too much; (7) the reinforcing mesh has failed; (8) the wrong type of insulation was used; (9) the insulation board has shrunk within the EIFS; (10) racking forces are present at the corners of the openings; (11) the mesh was damaged as it was being installed; (12) the depth of an aesthetic reveal is too deep. Robert G Thomas, Jr, *op. cit.* n. 2, at 18.

¹¹ See David L Grenier and William J Jorgensen, *op. cit.* n. 4: "It is recommended by the manufacturer that a professional caulker and sealer complete the seal around all window and door openings. However,

2. Who is to blame?

A vigorous debate has raged over whether the problems with EIFS-clad structures are due to poor workmanship or poor product design.¹² EIFS manufacturers contend that their products are safe and soundly designed

real problems occur when homeowners add an attached deck and crack the EIFS waterproof system, or attach a hose rack to the side of the EIFS-coated house. Both of these examples greatly reduce the integrity of the waterproof system. Another mistake made by homeowners is not maintaining the caulk around window and door openings. This also causes water to infiltrate and get behind the EIFS.”

National Association of Home Builders, *op. cit.* n. 7: “Unlike other types of cladding, the design of barrier EIFS does not allow the draining of water that gets behind the system, either through building components (openings in the building envelope for doors, windows, etc.) or when sealants break down or crack.”

¹² This debate commonly plays out in the courtroom between experts, where testimony is elicited about the failings of nearly all those involved in the design, manufacturing, and installation process. A typical example can be found in the Ohio appellate decision in *Mahvi v. Stanley Builders*, 2005 WL 3366973, *4 (Ohio Ct App 11 Dist, 9 Dec 2005):

“After inspection of the home, Zwayer concluded that ‘[t]he leakage and subsequent damage to the Mahvi residence was not the result of any defect in design and manufacture of the EIFS or its materials. The leakage and subsequent damage is the result of the lack of proper roof edge termination, leaking windows and the contractor’s failure to construct the exterior walls in accordance with the manufacturer’s typical instructions and details and the Architect’s details. The fact that the exterior cladding material is EIFS is immaterial to causes of the leakage and the resulting damage. It is our opinion that, if the residence had been clad with a stucco system, which is a water management system as recommended by [the Wright Report] that was not available as an EIFS system in 1988, and the contractor had utilized the same lack of diligence to proper construction, the damage to the sheathing and framing would likely have been greater.’

RPM [the alleged maker of the exterior finish coat, although there was much dispute over whether the product was actually made by RPM] also used the Wright report to support its motion for summary judgment. The report, which was supported by affidavit, produced on behalf of the defendant, and provided to RPM during the course of discovery, asserted that ‘[t]he barrier EIFS design concept by Parex is inherently flawed and does not perform as intended’.

The report went on to explain that ‘[i]n installation deficiencies increased avenues through which water intrusion occurred that seriously aggravated and accelerated damages to building components behind the EIFS. However, Parex designed the installation details and methods that were prone to fail and provided inadequate training to applicators for the installation of the barrier EIFS that contributed to the installation deficiencies. Installation deficiencies reported at the Mahvi residence were types of deficiencies commonly found on residences with barrier EIFS claddings.’

The Kraly report, which was also used in support of RPM’s motion for summary judgment, concluded, in relevant part, that ‘[d]eterioration of the EIFS installation at the residence located at 14611 Shore Court-Novelty, Ohio 44072, occurred over an extended period of time and exhibited signs that the problems that developed at [sic] are part of the comprehensive list . . . including: 1) *Cracking*; 2) *Inadequate Closure*; and 3) *System Detachment*. As described in this report and attached publications, some of the problems are attributed to installation errors, lack of required materials and maintenance issues, all of which resulted in an excessive amount of destructive moisture within the components.’

Taken together, these reports uniformly conclude that installation deficiencies and poor maintenance were the cause of the damage to appellants’ home, rather than any inherent defect to the product. On the basis of this evidence, RPM shifted the burden to appellants to show that there was a genuine issue of material fact on each element of their products liability claim, by demonstrating that there was no connection between the damages suffered by appellants and the failure of an RPM product. Appellants acknowledged as much in their brief in response to RPM’s motion for summary judgment.”

The court’s conclusion should not be interpreted as a blanket statement that the EIFS was not defective. Later on in the opinion the court notes that, because appellants “fail to establish any connection between RPM and Parex, the trial court’s grant of summary judgment was appropriate”. *Mahvi v. Stanley Builders*, above.

and can perform more than adequately if properly installed.¹³ Others, including some construction professionals and EIFS homeowners, contend that all EIFS is defective.¹⁴ Truth is elusive.¹⁵

¹³ A “Frequently Asked Question” format from one industry source contains the following exchange:

Q. I see a lot on the internet about EIFS being a ‘bad’ product? Is this true?

A. No. EIFS as a product is just fine. There have been some cases of EIFS clad walls not performing well, but the EIFS itself was not the cause, although the internet says it is. Most of this ‘bad press’ comes from uninformed sources, or from people ‘trolling’ for business using fear as a motive to gain sales or notoriety. It’s disgusting.

Q. Does EIFS leak?

A. No. EIFS itself does not. Almost all leaks in EIFS-clad walls assemblies occur where the EIFS meets another wall element, such as windows, doors, flashings and caulking. Tell your lawyer to blame someone else.”

R Gordon Thomas, *Frequently Asked Questions (FAQs) About EIFS* (2005), available at www.eifs.com. Mr Thomas does consulting work on EIFS issues and his website describes him as “an architect by education, former Manager of Technical Services at Dryvit company, chairman of the American Society for Testing and Materials (ASTM) committee on EIFS, and author of countless publications about EIFS”: Robert G Thomas, Jr, *op. cit.* n. 2, at 1.

¹⁴ National Association of Home Builders, *op. cit.* n. 7: “NAHB believes that homes with barrier EIFS can develop moisture intrusion problems even when properly constructed according to industry standards”; G K Garten, “Rain Penetration and its Control,” 40 *Canadian Building Digest* (1963): “It is not conceivable that a building designer can prevent the exterior surface of a wall from getting wet nor that he can guarantee that no openings will develop to permit the passage of water . . . Even more difficult is the maintenance of a perfect joint over a reasonable period of time, because of the aging of sealant and because differential movements between the elements constantly flex and stress the joint material. Skill and new sealing materials can be employed, but it is seldom possible to guarantee that no openings will develop to permit the passage of water.”

¹⁵ As one commentator put it:

“Arguably, manufacturers, installers and general contractors all contributed to the problems which thousands of synthetic stucco homeowners are now suffering. Of course, the manufacturers claim that if their instructions had been followed, moisture would not have intruded and destroyed the framing of the synthetic stucco homes. The general contractors rebut this argument by claiming that the system simply cannot be constructed to the degree of perfection required in order to prevent moisture intrusion. The case which builders make against the manufacturers is reasonably straightforward. They contend that there are several ways in which the manufacturers designed, marketed, and sold the defective product, including:

The synthetic stucco system is not an effective barrier system. It is impossible in the field to build a system which prevents water from reaching a home’s sheathing and studs. Newer ‘water management’ synthetic stucco systems (and the latest position espoused by EIMA [EIFS trade association]) recognise this fact. New systems incorporate a moisture barrier on the sheathing to drain the moisture and have a weep capability which sheds the water. EIFS is a multi-component system, which potentially involves many different trades if it is to be installed correctly—namely, installers, roofers, framers, general contractors, painters, etc. The manufacturers knew about the system’s complexities and failed to adequately train or inform those in the field who were responsible for various aspects of installation. Most importantly, the manufacturers received thousands of complaints over the last decade about installation deficiencies, were well aware of widespread misapplication and took insufficient steps to rectify these problems.

Besides giving incomplete information to those responsible for applying the system, the manufacturers sold EIFS as a low or no maintenance product. Nothing could be further from the truth. EIFS is a complex, unforgiving and extremely high maintenance cladding. In its [*sic*] defense, the manufacturers say that if a system is installed according to specifications, no moisture intrusion, and no damage, will occur. The manufacturers essentially contend that the system can be installed in a manner which prevents moisture intrusion. The fact that it is not so installed represents the case against the stucco installer and the general contractor.

3. Judicial expressions of who is at fault

There are few court decisions addressing ultimate responsibility for moisture intrusion in EIFS cladding. A decision from Norfolk Circuit Judge, Joseph A Leafe, in *Board of Directors of the Bay Point Condominium Association, Inc v. RML Corp.*¹⁶ has received a fair amount of attention, particularly from those seeking recovery from EIFS manufacturers. Judge Leafe determined that Dryvit's barrier EIFS system, known as "Outsulation", was defective:

"The record in the instant case is replete with evidence showing that Dryvit's Outsulation did not pass without objection in the trade and that Outsulation was not fit for its ordinary purpose at the time it was sold to RML, or for that matter, at any time at all.

It is obvious to this Court that Outsulation does not pass without objection in the trade. RML presented several experts to prove this point and it is evident from the testimony elicited at trial that Outsulation has many vehement opponents within the architectural, design, and building communities. These communities constitute a large segment of the advising and purchasing public for building materials such as Outsulation and thus, reasonably constitute the 'buying public' as noted in the statute [Virginia's version of Article 2 of the Uniform Commercial Code].

The manufacturer's case against the installer and builder is also straightforward. Dating back to the late 1980s, there were industry standards governing application of EIFS. These were promulgated and published by EIMA, and refined by individual manufacturers. Most manufacturers issued details and specifications (of widely varying quality) for installation of the product. For numerous reasons, these details and specifications were grossly ignored in the field. Regular features of misapplication include:

- The absence of proper kickout flashing at roof wall intersections, and the absence of sill, header and pan flashing at windows.
- The absence of sealant joints around windows and doors, and other locations where synthetic stucco meets dissimilar materials such as wood.
- The absence of backer rods where there are sealant joints.
- The absence of sufficient caulking or sealant in these areas.
- The absence of sealants at penetrations where gutters, downspouts, and other fixtures are attached to the house.
- Insufficient thickness of the base coat. Base coat thickness is required to be at least one-sixteenth of an inch.
- Inadequate backwrapping.
- The absence of moisture barrier on the sheathing.
- Improper application of foam panels, resulting in delamination and cracks, through which water intrudes.
- Absence of rough opening flashing around the windows, to permit EPS board to be adhered to the sheathing directly.
- Bringing the synthetic stucco into the ground, providing a ready route for termites.
- Using the wrong kind of adhesion, or applying adhesives incorrectly, resulting in delamination, cracks and moisture intrusion.
- Misapplication of mechanical fasteners which adhere the foam to the sheathing.

Most of these requirements were addressed in the manufacturers' specifications. In essentially every synthetic stucco house built before 1996, however, one or more of these specifications is violated. Such improper application is one of the primary reasons for current moisture damage to houses.

So the question remains: Defective product or shoddy construction? A strong case can be made that it is a little bit—or a lot—of both."

See EIFS Legal Network, *EIFS Problem or Shoddy Construction?*, www.eifslaw.com.

¹⁶ At Law, No CL99-475 (28 Jan 2002).

The testimony elicited at trial also established that an acceptable exterior cladding must be sufficiently durable so as to shed water from the face, and exclude water from the interior, of a building structure. Unlike Outsulation, well-known and highly tested materials such as brick, hardi-plank, and molded vinyl routinely demonstrate the ability to divert or drain water that inevitably intrudes through common points of intrusion, or are of a nature that allows the water to evaporate through the material . . .

The evidence adduced at trial made it clear that there were no accommodations made, or redundancies built-in, for the inevitable water intrusion that would occur behind Outsulation, even though Dryvit acknowledged Outsulation's problems with water intrusion years prior to Spyglass's construction. As stated by Dr Robert Kudder, defendants' witness, '[t]he exterior wall has to function as a barrier, otherwise it is not doing its job as a wall'. Therefore, Outsulation by not being able to function as a barrier, fails as an acceptable wall system . . .

This Court finds that Outsulation is not fit for its ordinary purpose because it did not provide the alleged barrier to water intrusion and as a consequence trapped water behind the system; it did not provide a means to drain or divert water that intruded behind the 'barrier' system; it failed to provide accurate specifications, instructions, and details for common points of water intrusion; and because Dryvit abandoned any type of training program, it failed to properly train applicators, all the while 'certifying' them to apply Outsulation.

This Court remains unpersuaded that the incorrect installation of Outsulation and admitted shoddy construction at Spyglass constitute misuse of the product, caused the failure of the Outsulation system or even mitigates defendants' responsibility in the instant matter. Defendants failed to maintain a training and certification program even though certifications for applicators were issued on a yearly basis. Defendants also failed to provide critical and necessary details, specifications, and instructions regarding Outsulation, common points of water intrusion, and information on how to integrate the Outsulation with other building components.

While the Court finds that the installation complied with the general standards in the trade, even if the Outsulation were perfectly applied according to Dryvit's specifications, instructions, and details, the patented Outsulation 'system' consisting of the method of application and the component parts, is intrinsically defective and thus, is not merchantable. The representations made by defendants in relation to the Outsulation product cannot, under any circumstances, be fulfilled. Outsulation is far from maintenance-free and is not suitable for use on wood framed residential construction."¹⁷

¹⁷ *Ibid.*, available at www.eifsfacts.org and www.hadd.com. Other decisions hew to a contrary line of reasoning. For example, in *Oechsner v. Porter*, 169 F Supp 2d 1322, 1324 (SD. Ala 2001) a contractor's third-party claim against an EIFS manufacturer was rejected for lack of evidence establishing the product was inherently flawed:

"Porter's theories of recovery against Parex and KPJ are all based on the assumption that the EIFS system is inherently flawed because proper installation can only be accomplished with machine calibrated application, something nearly impossible to accomplish in the field. The problem with the theory, however, is that it is not supported by the evidence. Even Porter's own expert, Fell, opined that EIFS does suffer from 'not having the ability to provide adequate exterior cladding *due to misuse of the products by applicators* . . .', which problems ' . . . have also been greatly heightened by moisture intrusion problems associated with adjacent construction items such as windows, sealants, doors, roof, and flashings'.

This Court finds that all of these problems, Porter brought upon himself, through his own neglect of prudent construction/application principles in the construction of the Oechsner's [*sic*] house. Fell was unequivocal in his testimony, and as a result, this Court finds that EIFS systems can be installed to a degree of success as high as 90%. Fell had no way of knowing whether the application by Porter's subcontractor of the EIFS coating on the Plaintiffs' house was 90% or 10% successful, because by the time he was retained, the home had been completely remediated and none of the original Porter installed EIFS system, flashing, or sealants, were available to test.

4. Suitability concerns over the use of EIFS

This controversy suggests that there is a significant suitability issue with respect to the use of EIFS in residential construction. This is particularly the case where climate considerations and the availability of suitably trained construction trades create heightened concerns. The National Association of Home Builders has developed a white paper on the key quality control points for builders using EIFS for new home construction.¹⁸ This report admonishes contractors to ensure that the selected EIFS is approved by: (1) the local code enforcement body; (2) the homeowner's liability insurer; (3) the trade contractor's liability insurer; (4) the EIFS manufacturer (for climate region); and (5) the homeowner's mortgage lender. The report also notes:

"As the risk of water intrusion increases, the selection of a water-managed EIF system becomes increasingly significant. Moisture intrusion risks increase in wet climates and in windy areas. Building design factors may also contribute to moisture intrusion risks, including complex roof lines, elaborate siding surface features, and number and extent of penetrations that interrupt the siding surface. All of these factors must be considered when determining which type of EIF system, water-managed or barrier, is appropriate for application as an exterior siding."¹⁹

Thus, Porter's claim against Parex and KPF [*sic*] fails if for no other reason than he has not proven by a preponderance of the evidence what degree, if any, of the damage to the Plaintiffs' home was caused by any alleged defect in the EIFS system itself. This Court finds the evidence in this case has failed to establish any such defect, and even if it had been established, damages cannot be awarded based on speculation, conjecture, or surmise." (Emphasis in the original.)

See also, Brett L Crumpton, *The History of EIFS—A History of Problems* (2004): "In May, 2002, a case went to trial in Washington state against another EIFS supply manufacturer, Sto Corporation. After six weeks of trial the jury found that: (1) Sto Corporation supplied a product which was not reasonably safe because adequate warnings or instructions were not provided with the product; (2) Sto Corporation was negligent in that the product was not reasonably safe because adequate warnings or instructions were not provided after the product was manufactured; (3) the unsafe condition of the EIFS was the proximate cause of the homeowners' damage; and (4) Sto Corporation violated the Washington State Consumer Protection Act. *Mayer v. Sto Corporation, et al.* [98 P 3d 116]." Mr Crumpton also contends that (1) the EIFS Trade Association, EIFS Industry Members Association (EIMA), has adopted an "official position" that barrier EIFS should not be used on residential construction, and (2) that barrier EIFS in residential construction is prohibited by the building codes of a large number of jurisdictions. See also National Building Code of Canada, Part V, 1990 Edition ("When the sealants of a face-sealed cladding fail, the walls lose their water-tightness and air-tightness; this translates into severe disability of the envelope in performing its intended functions. As a consequence, face sealed walls require frequent and costly maintenance during the life of the building. The approach has little to recommend it and is considered impractical for buildings in Canada."); US Gypson Co., "USG Press Room: Summary of EIFS Research" (1996) ("US Gypson believes that the relative quality of construction of EIFS claddings in New Hanover County is representative of other markets in the US. Factors that influence the integrity of EIFS walls include design, workmanship, window quality, sealant performance and long-term maintenance of sealants. Additionally, local climate conditions and vapor-control practices will affect wall-drying potential. As such, US Gypson has concluded that barrier-EIFS construction and maintenance is impractical and EIFS performance is unreliable." Quoted at www.eifsfacts.org and www.hadd.com.

¹⁸ NAHB Research Center, Inc, *Quality Plan for Installation of Exterior Insulation and Finish Systems (EIFS)* (1999), available at www.c-risk.com/Construction-Risk/eifsqp.pdf.

¹⁹ *Ibid.* at 5. The NAHB Research Center has a toll-free number (1-800-898-2842), and may be contacted with technical questions about EIFS. The report also contains a very complete quality assurance review checklist covering over 60 separate aspects of the selection, installation and inspection process. For another helpful checklist, see Robert G Thomas, Jr, *op. cit.* n. 2, at 29.

Risk management experts concur that the success of any EIFS is dependent upon a proper suitability review and quality installation methodology.²⁰ All interested industry participants, including manufacturers, design professionals, contractors, owners, mortgagees and insurers must strive to achieve the quality control necessary to make these systems work. Quality training and installation instructions are critical. Regular site inspections by properly trained individuals in QA/QC for the particular system being installed (most likely a manufacturer's representative) is an important feature of any quality control programme.²¹ Design coordination between the professional responsible for the overall project and the EIFS manufacturer is an important factor. It is important that proper materials selection is specified and that the EIFS product is suitable for the project in question.²²

IV. A BRIEF OVERVIEW OF EIFS LITIGATION

Litigation over the design, manufacture and installation of EIFS can be expensive, and typically involves a great variety of legal theories including

²⁰ See David L Grenier and William J Jorgensen, *op. cit.* n. 4.

²¹ In the words of one risk management consultant:

“[W]e believe that the situation can be greatly improved if loss control field personnel conduct job inspections as follows:

- A loss control person should be present during critical EIFS installation times. This may require more time spent on the job than typically figured, but the extra time will be required until the EIFS situation is under control. A loss control person's presence may not guarantee zero defects, but it will improve the potential for a quality installation process.
- All EIFS installers should be checked for their installer's certification card. Some form of additional identification should also verify their identity; e.g. driver's license, etc.
- Site inspections should be conducted both with scheduled site inspections and unannounced visits.
- All QC/QA personnel should have on their person the recommended manufacturer's installation specifications for the particular product being applied.
- Inspection personnel should pay particular attention where dissimilar products meet; e.g., window frame to EIFS, door frames to EIFS, where different materials tie-in at inside and outside corners.
- Only products that have a water management system should be incorporated into the design. A weep system should be incorporated into the design along with the drainage channels, if applicable, on the backside of the extruded polystyrene (EPS).
- Careful attention needs to be made at the fastening of the EPS to eliminate penetrations.”

David L Grenier and William J Jorgensen, *op. cit.* n. 4.

²² For example, the interaction between the building envelope and its HVAC system can be of critical importance: “In hot, humid climates the interrelationship between the building envelope and the building HVAC system is especially critical. Moisture and mold-related IAQ [indoor air quality] problems in humid climates are often misdiagnosed as either exclusively envelope- or HVAC-related, because the complex relationship that exists between both systems is not always clearly understood. Once moisture problems occur, many investigators fail to account for the fact that, on a cooling season basis, HVAC-induced moisture can equal or sometimes far exceed the amount of moisture attributable to rainwater leaks. Additionally, HVAC-induced moisture can mask, or obscure, rainwater leakage problems because it is often an envelopewide problem. This misunderstanding can lead to misdiagnosis which often results in spending repair dollars modifying the building envelope to solve moisture,

breach of implied warranties (both merchantability and fitness for a particular purpose), breach of express warranties, negligence, negligent misrepresentation, fraud, breach of contract, Consumer Protection Act violations, breach of implied warranty of habitability, breach of workmanlike performance warranties, products liability claims, claims for indemnity and contribution, violations of the Magnuson-Moss Act, and violations of the Lanham Act.²³ If there is a theme that plays itself out in the reported decisions, it is that many of these claims are subject to a statute of limitations or statute of repose defence.²⁴ This is not surprising, given the fact that moisture infiltration problems, particularly in exterior wall systems, can take a long time to manifest themselves. When they do, it is not entirely clear just where the problem lies. Commonly encountered issues include:

- (1) What is the appropriate statute of limitations/statute of repose for the particular claim at issue?²⁵

microbial growth, and other IAQ problems when simply modifying the HVAC system would have been less expensive and more effective.” J David Odom and George H DuBose, *op. cit* n. 9, at 1–10, 1–11.

²³ See *Mayer v. Sto Industries, Inc.*, 98 P 3d 116 (Wash Ct App Div 2, 2004) (alleging violations of Consumer Protection Act and Product Liability Act); *Andres v. McNeil Co, Inc.*, 707 NW 2d 777 (Neb, 2005) (alleging theories of negligence, breach of implied duty to perform in workmanlike manner, breach of implied warranty of habitability, fraudulent concealment, and breach of express warranty); *Weiss v. Polymer Plastics Corp.*, 21 AD 3d 1095, 802 NYS 2d 174 (NYAD 2005) (alleging fraud, breach of express and implied warranties, strict products liability, and deceptive trade practices); *In re Stucco Litigation*, 364 F Supp 2d 539 (ED NC, 2005) (alleging negligence and strict liability); *McFadden v. Dryvit Systems, Inc.*, 2004 WL 2278542 (D Or, 8 Oct 2004) (alleging deceit, strict liability, and violation of the Magnuson-Moss Warranty Act, 115 USC §2301 *et seq.*, breach of implied warranty of merchantability, and breach of implied warranty of fitness); *John Q Hammons Hotels, Inc v. Acorn Window Systems, Inc.*, 2003 WL 22852124 (ND Iowa, 15 Oct 2003) (alleging claims for express warranty, implied warranty, negligence, strict liability, breach of contract, negligent misrepresentation, as well as indemnity and contribution); *Hansen v. Stanley Martin Companies, Inc.*, 585 SE 2d 567 (Va 2003) (alleging violations of Maryland Consumer Protection Act, breach of contract, fraud, negligence and negligent misrepresentation); *Park Avenue Condominium Owners Association v. Buchan Developments, LLC*, 71 P 3d 692 (Wash Ct App Div 1, 2003) (breach of implied warranties and violation of warranties under state’s Condominium Act); *Palte Home Corp v. Parex, Inc.*, 579 SE 2d 188 (Va 2003) (breach of express warranty, breach of implied warranty, indemnification and contribution); *Swain v. Preston Falls East, LLC*, 576 SE 2d 699 (NC Ct App, 2003) (negligence, breach of implied warranties, negligent misrepresentation, gross negligence and unfair and deceptive practices); *Everts v. Parkinson*, 555 SE 2d 667 (NC Ct App, 2001) (allegations of fraud, negligent misrepresentation, breach of contract, breach of warranty and negligence); *Parker-Smith v. Sto Corp.*, 551 SE 2d 615 (Va 2001) (false advertising, breach of warranty and fraud); *Groppe v. Sto Corp.*, 552 SE 2d 118 (Ga Ct App 2001) (strict liability, breach of contract, breach of warranty, fraud and negligence); *Medlin v. Fyco, Inc.*, 534 SE 2d 622 (NC Ct App, 2000) (breach of implied warranty of habitability); *Boackle v. Bedwell Const Co, Inc.*, 770 So 2d 1076 (Ala 2000) (fraudulent suppression claim); *Maday v. Toll Brothers, Inc.*, 72 F Supp 2d 599 (ED Va, 1999) (false advertising claim under the Lanham Act, 15 USC §1125(a)); *Hall v. Harris*, 521 SE 2d 638 (Ga Ct App 1999) (fraud, negligent misrepresentation, breach of contract and negligence *per se*); *Centex-Rooney Const Co, Inc v. Martin County*, 706 So 2d 20 (Fla Ct App 4 Dist 1998) (breach of contract).

²⁴ For a fuller discussion of construction-related statutes of limitation and repose, see Bruner & O’Connor on Construction Law at §§7:174.50–174.62.

²⁵ See *Stimson v. George Laycock, Inc.*, 542 SE 2d 121 (Ga Ct App, 2000) (six-year limitation period for contract actions applied rather than four-year statute of limitation for damage to property actions); *Parker-Smith v. Sto Corp.*, 551 SE 2d 615 (Va 2001) (“catch-all” limitation period applied to claim for false advertising).

- (2) Just when did the cause(s) of action accrue?²⁶ and
- (3) Whether some theory of waiver of estoppel operates to toll the operation of the limitations period?²⁷

²⁶ This issue is most often a factual question of who knew what when. Sometimes, however, courts discuss the broader question of just what needs to be discovered—the injury or the fact that a legal wrong has been committed. A homeowner discovering moisture in his or her home may have stumbled upon an injury but may have no idea of its significance or whether legal redress is available. The courts split on this question with the majority favouring accrual on the mere discovery of a problem. See *John Q Hammons Hotels, Inc v. Acorn Window Systems, Inc*, 2003 WL 22852124 (ND Iowa, 15 Oct 2003) (discovery of leaks sufficient to trigger running of statute of limitations); *Mayer v. Sto Industries, Inc*, 98 P 3d 116 (Wash Ct App Div 2, 2004) (violations of Consumer Protection Act accrued and four-year limitations period began to run, not when homeowners first noticed rust stains around their windows, but later when they discovered dry rot and began to think that combination of windows and siding was cause of their problem); *Everts v. Parkinson*, 555 SE 2d 667, 670–671 (NC Ct App, 2001) (“We believe the Parkinsons were not entitled to summary judgment on the basis of the statute of limitations because the facts here are in conflict as to when the statute of limitations period started to run. The parties do not dispute that all of the plaintiffs’ claims against Parkinson are three-year statute of limitations set forth in NC Gen Stat §152. There is also no dispute that plaintiffs’ causes of action did not accrue until the defect or damage to plaintiffs’ property became apparent or ought reasonably have become apparent to them. Thus, whether these claims are barred by the statute of limitations requires a determination of when the alleged defect or damage became apparent, or ought reasonably to have become apparent to plaintiffs.”).

The North Carolina decision is interesting in so far as it tends to blend the conflicting positions into a single statement of law. The discovery of the “damage” is significantly different than the discovery of the “defect”. Plaintiffs usually discover “damage” from EIFS problems well before they discover the “defect”. The accrual issues raised by statutes of repose are generally less difficult to apply from a factual standpoint, as these statutes generally do not run from the discovery of something but from a clearly identifiable date, such as substantial completion (although these issues are, perhaps, more controversial, as they can cut off redress even before a party has been injured). Again, another North Carolina decision reveals the difference. See *Henderson v. Park Homes, Inc*, 555 SE 2d 926, 928–929 (NC Ct App, 2001) (“Plaintiffs claim the running of the time period did not begin until the date of the purchase of their home in April of 1993. This Court, however, recently held that the statute of repose was triggered upon the purchase by the subcontractor of the EIFS for installation on plaintiffs’ home . . . Accordingly, the EIFS was first purchased for use or consumption by Southern for installation on plaintiffs’ residence. Southern installed the EIFS on plaintiffs’ home in late fall of 1992, the statute of repose, therefore, began to run before 5 March 1993, and plaintiffs’ suit, filed more than six years after Southern’s purchase of the EIFS, is barred.”)

²⁷ See *Cacha v. Montaco, Inc*, 554 SE.2d 388 (NC Ct App, 2001) (home purchaser failed to show sufficient wilful or wanton negligence by builder for subcontractor to satisfy the equitable tolling exception to the statute of repose). For a fuller description of waiver and estoppel theories and their operation on statutes of limitation and repose, see *Bruner & O’Connor on Construction Law* at §7:174.61. Because EIFS litigation often involves claims of fraud and misrepresentation, waiver and estoppel theories can play a significant role when evaluating a statute of limitations bar. Still, the claim of fraud is not a “get out of jail free” card for statute of limitations purposes. See *Hansen v. Stanley Martin Companies, Inc*, 585 SE 2d 567 (Va 2003) (fraud allegation based on claim that EIFS was maintenance-free accrued when homeowners received closing materials indicating they had to inspect their home every three months for water infiltration of the EIFS and they were responsible for maintaining the caulk seal around the home and fraud claim dismissed because plaintiffs failed to sue in time). Equitable tolling doctrines, however, are much less effective against statutes of repose. See *Monson v. Paramount Homes, Inc*, 515 SE 2d 445, 449–450 (NC Ct App, 1999):

“While equitable doctrines may toll statutes of limitation, they do not toll substantive rights created by statutes of repose. The statute of repose codified as NC Gen Stat §150(5) is ‘designed to limit the potential liability of architects, contractors, and perhaps others in the construction industry for improvements made to real property’. To allow the statute of repose to toll or start running anew each time a repair is made would subject a defendant to potential open-ended liability for an indefinite period of time, defeating the very purpose of statutes of repose such as NC Gen Stat §150(5). A statute of repose ‘serves as an unyielding and absolute barrier that prevents a plaintiff’s

Warranty claims can be subject to notice defences.²⁸ On occasion, a claim of contributory negligence may prove successful.²⁹ The economic loss doctrine can also play a role in these cases.³⁰ At least one court found that

right of action even before his cause of action may accrue', and functions to give a defendant a vested right not to be sued if the plaintiff fails to file within the prescribed period. In short, a statute of repose bars an action a specified number of years after a defendant has completed an act, even if the plaintiff has not yet suffered injury. . . .

According to Gen Stat §150(5) the statute of repose begins running at the later of the last act or omission or date of substantial completion. Other courts have held that since all liability has its genesis in the contractual relationship of the parties, an owner's claim arising out of defective construction accrues on completion of performance 'no matter how a claim is characterized in the complaint—negligence, malpractice, breach of contract'. [Citations omitted.]

Moreover, statutes of repose tend to be triggered on a more concrete event than the discovery of some condition or problem. Statute of limitations defenses are frequently more fraught with factual disputes. See *Knowles v. Mercurio Custom Homes, Inc.*, 2005 WL 27468, * 5–6 (Ohio App 1 Dist, 7 Jan 2005).

The defendants argue that it is clear that the Bindas [first homeowners] and even the Ketchums [second homeowners] 'discovered' the water damage to the house while they lived in it. They cite Pamela Ketchum's testimony that she had the windows on the house repainted several times because the paint was peeling. They also cite Doris Bindas' testimony that she discovered rotted wood in the windows. According to defendants, these problems, discovered both by the Ketchums and the Bindas, were the same problems created by the faulty EIFS and windows that formed the basis of the Knowleses' [third owners'] suit.

The Knowleses counter that knowledge of peeling paint and rotten wood in the window sills was not knowledge of the extensive water damage to the structure of the house ultimately caused by the faulty EIFS and windows. They argue that they were told, as the Bindas believed, that any problems with the windows have been fixed and would not occur again.

The trial court considered the Knowleses' argument to reflect merely a dispute about whether the previous owners had discovered the problem or part of the problem. The trial court determined that this distinction did not matter, citing *Jones v. Hughey*. In *Jones*, the court stated, 'Ohio courts have held that it is "unnecessary that the full extent of the damages be ascertainable" in determining the accrual date of a cause of action for statute of limitations purposes . . . Thus, "an accrual of a cause of action is not delayed until the full extent of the resulting damage is known".'

But it is a question of fact whether the knowledge of the Ketchums and Bindas that paint was peeling and wood was rotting in the window sills meant they had discovered—to any extent—the fundamental problems with the house.

The defendants further argue that, at the least, the homeowners should have, through the exercise of reasonable diligence, discovered the problems. The Ohio Supreme Court has defined reasonable diligence as a 'fair, proper, and due degree of care and activity, measured with reference to the particular circumstances, such diligence, care, or attention as might be expected from a man of ordinary prudence and activity'. The court emphasized, '[W]hat constitutes reasonable diligence will depend on the facts and circumstances of each particular case'.

Under the facts and circumstances of this case, it is not a clear issue of law what a homeowner of ordinary prudence would have done when faced with peeling paint and rotting windows, or whether these problems would have suggested the extensive problems caused by the allegedly defective EIFS. It is a question of fact.

Because questions of fact remain, we sustain the Knowleses' assignment of error. We reverse the entry of summary judgment and remand the case to the trial court for further proceedings according to law."

²⁸ See *Turner v. Westhampton Court, LLC*, 903 So 2d 82, 91–92 (Ala 2004) (new-home warranty claim dismissed for purchaser's failure to give notice of defect within one year of commencement of the warranty).

²⁹ See *Swain v. Preston Falls East, LLC*, 576 SE 2d 699 (NC Ct App, 2003) (homeowner's failure to have townhouse stucco inspected before purchase amounted to contributory negligence, precluding recovery). Of course, the jurisdiction in question must recognise contributory negligence for this defence to have any traction. See also, *Bruner & O'Connor on Construction Law* at §10:118.

³⁰ See *In re Stucco Litigation*, 364 F Supp 2d 539 (ED NC 2005) (economic loss doctrine barring recovery in tort for disappointed commercial expectations precluded recovery under Illinois law on

subsequent purchasers of an EIFS-clad home could not pursue the manufacturer in negligence as no duty was owed to them.³¹

The variety of claims and the numerous defences, coupled with the extensive expert testimony necessary to establish fault and causation, makes EIFS cases very expensive to litigate. Reminiscent of Voltaire's familiar quote of being ruined twice in his life, once when he lost a lawsuit and again when he won, because EIFS litigation can be very costly, it is best to avoid it entirely by employing proper risk management practices.³²

negligence and strict liability claims); *Weiss v. Polymer Plastics Corp.*, 21 AD 3d 1095, 802 NYS 2d 174 (2005) (tort-based causes of action were barred by economic loss doctrine). But see *McFadden v. Dryvit Systems, Inc.*, 2004 WL 2278542 (D Or, 8 Oct 2004) (economic loss doctrine rejected under "damage to other property" exception).

³¹ *Keck v. Dryvit Systems, Inc.*, 830 So 2d 1 (Ala 2002).

³² Charles Dickens's account of the never-ending will dispute in *Bleak House* is apropos:

" 'Mr Kenge', said Allan, appearing enlightened all in a moment, 'excuse me, our time presses. Do I understand that the whole estate is found to have been absorbed in costs?'
'Hem! I believe so', returned Mr Kenge.
'And that thus the suit lapses and melts away?'
'Probably', returned Mr Kenge."