EXHIBIT E

Corrected Expert Report of David Brookstein, Sc.D.
Matters Related to US Patent 5,981,021

I am David S. Brookstein, Sc.D. and proffer myself as a qualified expert in the field of textile engineering and science and offer my expert opinion and judgment on certain matters associated with **US Patent 5,981,021 – Transfer Printing Flocked Fabric.** I have been compensated at my regular consultation rate of $300/hour for research, report preparation and testimony associated with this matter.

I currently serve as Dean and Professor of the School of Textiles and Materials Technology at Philadelphia University. I have served in this capacity continuously since 1994. Prior to that I was Associate Director of the Albany International Research Co., an organization primarily concerned with textile research, in Mansfield, MA. I served on the research staff of Albany International continuously from 1980 until 1994 when I resigned to assume the deanship at Philadelphia University. At Albany International Research Co. I was responsible for managing textile engineering research products in a wide range of areas including high performance fabrics, biomedical fabrics, fiber reinforced composites and paper making machine fabrics. I joined the faculty of the School of Textile Engineering of the College of Engineering at Georgia Tech in 1975 and served continuously as an assistant professor of textile engineering until 1980 when I resigned to join the research staff of Albany International. In 1976 I was awarded the Doctor of Science degree from MIT for research in the field of mechanical/textile engineering. My doctoral dissertation dealt with a textile-engineering analysis. In 1973 I was awarded the MS degree in Textile Technology from MIT and in 1971 I was awarded the Bachelor of Textile Engineering degree from Georgia Tech. I am a listed inventor on 11 US patents dealing with textile engineering structures and processes. I am a member of the American Society of Mechanical Engineers- International and was elected a Fellow of the Society in 1995. In 1992 I was elected Fellow of the Textile Institute (UK). In 1988 I was awarded The Fiber Society Award for Distinguished Achievement in Basic or Applied Fiber Science. In 1998 I was awarded the ASTM Harold DeWitt Smith Award

by Committee D-13 Textiles for "outstanding achievement in the science of textile fiber utilization". In 1993 I was the first American textile engineer to win the European Techtextil Innovation Prize in Germany. I have over 40 published papers in the field of textile engineering. Currently, and in addition to serving as dean at Philadelphia University, I am a Visiting Scholar at the Harvard Center for Textile and Apparel Research at Harvard University, Cambridge, MA. I am conducting a research study that is investigating patents and intellectual property trends in the textile and apparel industries.

In view of all of the above I represent myself as a textile engineering and science expert capable of rendering expert opinions and judgments on matters associated with US Patent 5,981,021 – Transfer Printing Flocked Fabric.

I have carefully studied United States Patent 5,981,021 (hereinafter referred to as '021) entitled Transfer Printing Flocked Fabric, James R. McCulloch-inventor, Microfibres, Inc-assignee, filed-July 31, 1992. '021 teaches a unique, novel, and non-obvious flocked textile product that has substantial attributes rendering it very useful in the textile fabric marketplace. The teaching enables a practitioner the opportunity to produce transfer printed fabrics that have substantial improvements associated with color fastness and unintended coloration physical removal, as evidenced by crock test results, and minimization of negative aesthetics qualities such as "grin' of the underlying base fabric substrate. It is my expert judgment and opinion that the inventor clearly recognized the potential for these unsuitable problems associated with transfer printed flocked fabrics and sought and invented a novel and non-obvious technical solution that could be implemented with his invention.

When one considers the Background of the Invention (Column 1, lines 18-63) the inventor points out that heat and pressure are needed to cause disperse dyestuffs to sublime into the flocked fiber substrate. Further, it is widely known in the field of textile engineering that increased pressure and temperature will enhance the dye diffusion process. This is problematic when one considers the required physical attributes of

flocked fabrics used for upholstery. Flocked fabrics for this application should have a relatively soft hand and this can only be achieved when the flocked fibers remain upright when adhered to the adhesive which bonds the flocked fibers to the underlying fabric substrate. Relatively high pressure and temperatures can, and will, approach or even exceed the glass transition temperature or molecular softening point of the thermoplastic flocked fibers, such as nylon or polyester, and under the relatively high pressures will cause the flocked fibers to flatten or mat thus creating an undesirable product for upholstery fabrics. The inventor recognizes this potential problem in Column 1 lines 33-36 ***"Transfer printed fabrics, having been exposed to heat and pressure in the printing process typically have a flat and papery look and hand. This is often deemed undesirable, especially in a flocked fabric."***

One method that is described to minimize heat and pressure during the transfer printing process involves the following. ***" Efforts to add substantial amounts of dyestuff to the print paper in order to achieve deeper shades have been unsuccessful because the dyestuff in such a heavy concentration is not fully absorbed into the fibers. As a result the dyestuff can rub-off, an undesirable and commercially unacceptable result. The rubbing off of the colors in this fashion is known as "crocking"."*** (Col. 1 lines 52-58).

Recognizing that relatively high heat and pressure and addition of substantial dyestuffs to the transfer print paper would yield unsuitable results for the intended application of the flocked fabrics, the inventor developed and discloses a method for minimizing heat and pressure and obviating the need for excessive dyestuffs by combining a product consisting of pigmented flock adhesive with the transfer printing process. This novel and non-obvious inventive idea solves a critical commercial problem that permits the manufacture of relatively lightly fiber dyed transfer printed flocked fabrics that do not appear to "grin" when folded, creased or bent in any fashion ***"The resulting fabric provides a deep, dark print which is crock-fast, and not subject to the objectionable grin-through. Also the hand is softer and loftier than conventionally printed flocked fabrics, largely because the pile is more erect"***. (Col. 4 lines 16-20).

The invention taught in '021 was initially filed for consideration of Letters of Patent on July 31, 1992. In a letter authored by Paul Lieberman, Supervisory Primary Examiner, Art Unit 115 dated April 13, 1994 the Examiner states ***"Applicant states in his specification that improvements by using the dark pigment include less grin-through and crocking. Yet applicant has shown no comparative evidence that such is the case".*** (Page 3). Subsequently in the refiled application, Serial number 09/192,393 filed on November 13, 1998 , William F. Laird, Director of Advanced Engineering of Microfibres, Inc. (the ultimate assignee company) under a Declaration Under 37.C.F.R. § 1.132 a declaration that comparative laboratory results show that light fastness and crock fastness, grin-through is minimized by the use of this invention (Para 10). In the USPTO Reasons for Allowance dated 5/21/99 by Margaret Einsmann, Primary Examiner 1751 the Examiner notes that ***"Applicant has presented a declaration showing that the use of a dark adhesive results in (1) improved lightfastness and (2) reduced crocking. The combined declaration is persuasive to overcome the rejection of record as the improvements were neither taught nor suggested by the prior art".*** (Page 2-3)

It is interesting to note that in an article entitled "Adhesives in Flocking: The Acrylics" in the trade journal Modern Textiles (June 1968) there is no mention of adding pigment to adhesives for flocked fabrics. It is also interesting to note that widely used textbook dealing with textiles (Textiles 6th Edition – Hollen, Sadler et al. 1988) states with regard to adhesive emulsions for flocking that ***"they are colorless and free of undesirable odor"***.

Though the publication date for "Textiles 6th Edition" is closest to the initial filing date (1992) of '021 it is interesting to note that Smith (USP 2,308,429)- 1943 teaches the ***"addition of a small amount of pigment to the adhesive used to adhere the flocks to the base"*** (noted in Reasons for Allowance – Margaret Einsmann – Primary Examiner 5/21/99) and that Orton (USP 4,427,414) – 1984 ***"Orton, column 1, discloses the problem of grinning through which has solved by the use of dark pigmented adhesive"*** (noted in Reasons for Allowance – Margaret Einsmann – Primary Examiner 5/21/99) . Finally in the Reasons for Allowance the Examiner states ***"Bernard (USP 4,294,577) –***

1981 discloses in column 1 line 30-46 that the process of transfer printing is inherently incapable of dyeing the substrate".

A careful review of these patents' specifications and claims indicates that their inventors did not anticipate or envision combining these textile subsystems with the transfer printing process. This supports my judgment that the invention of '021 was clearly not an obvious solution.

I have also reviewed three documents regarding adhesives:

The Flocking Process – Rohm and Haas

Adhesive Formulation for Flock Application – Bayer AG

Influences of Composition and Polarity of an Adhesive on Its Bonding Properties – Zorll

These documents address the application of coloring pigments and dyes to adhesives specified for the flocking process but make no mention of their use in conjunction with a subsequent transfer printing process.

The concept taught in '021 is further described in the Detailed Description of the Preferred Embodiments. ***"However, the pressure applied to the fabric need not be as great as when flocked fabrics are transfer printed conventionally. Since the dyestuff need only color the upper portions of the fibers, the damaging pressure conventionally used to penetrate the depths of the pile need not be used. The result is that the pile remains more upright and erect giving the fabric a softer and loftier hand than conventionally transfer printed flocked fabrics, as well as less grin-through and crocking. For example, when using a Gessner transfer print machine (available from Gessner Co. Greensboro, NC USA), pressures on the order of 60 pounds (27.3 kg) are used conventionally. With the invention, the pressure can be reduced to as low as ten pounds (4.5 kg) for some print patterns and still achieve good depth of shade".*** (Col 3 lines 39-52). As stated earlier in this letter, relatively high heat and pressure will reduce the loftiness of the thermoplastic flocked fibers since disperse sublimation dyeing is done

at or near the molecular softening point or glass transition temperatures of the nylon or polyester thermoplastic flocking fibers. Further, Retjo (US Patent 4.049,374) states ***"The heat and pressure employed in the process however render the surface of the fabric smooth and slippery, making the fabric undesirable for many uses, for example in certain kinds of clothing and upholstery."*** (Col 1 lines 24-27). His stated concern directed him to invent a method for simultaneous transfer printing and embossing or surface texturing method. A careful review of his patent indicates no mention of using pigmented adhesives. Nonetheless he accomplishes his objective using substantially different and unique methods as those taught in'021.

Masaki (USP 4,314,813) teaches a unique flock transfer sheet and flock transfer printing process using a hot melt adhesive wherein there is no mention of pigmentation of the adhesive.

I have carefully reviewed a series of patents dealing with transfer printed flocked fabrics for apparel usage. These are:

- Flocked Foam Fabric with Flattened Fibers which are Color Printed – Squires - US Patent 4,895,748
- Flocked Woven Fabric with Flattened Flock Fibers – Squires and Squires – US Patent 5,543,195
- Flocked Fabric Suitable as Outerwear - Squires and Squires – US Patent 5,756,180
- Flocked Fabric with Water Repellant Film – Squires and Squires – US Patent 5,863,633

This series of patents by the same inventor teach a method that is in direct opposition to '021 in that the desired mechanical attribute of the flock fibers is a flattening and not the plush and erect nature of the fabrics taught in '021. This is since these described in this series are fabrics for the apparel market and the fabrics for '021 are primarily for the upholstery market. Squires clearly teaches why a flattened fabric is more suitable for

apparel applications. '748 does mention a colored adhesive (Col. 2 line 67) but goes on to state ***"Such techniques, although simpler to do than selectively applying colored fibers or dyes, create color inconsistency problems due to the nature of polyurethane foam manufacture".***

Claim 10 of '021 claims ***"A fabric as in claim 1 wherein said fibers are arrayed on said substrate in a textured way, so that some fibers diverge from neighboring fibers more than other fibers and said pigment is visible between said divergent fibers."*** In the Detailed Description of the Preferred Embodiments it is stated ***"Alternatively, the fabric can go straight from flocking to transfer-printing and be subjected to thermal brushing after transfer-printing to restore the nap of the fabric".*** (Col. 4 lines 13-16). Air brushing, air texturing, air embossing of flocked fabric is not, in and of itself, novel and is taught and claimed in US Patent 4,294,577 for example. Nonetheless Claim 10 in '021 is unique, novel and non-obvious in that is in conjunction with Claim 1 in '021 which claims the unique, novel and non-obvious flocked fabric consisting of a pigment dyed adhesive and a transfer printing process that only dyes the upper ends of the flocked fibers.

In '021 there is a very critical function and utility to this pigment containing adhesive in that its use permits the important opportunity of substantially lowering the heat and pressure required to promote disperse dye transfer printing of the upper ends of the fibers and thus not rendering the resulting flocked fabric undesirable for the upholstery market. Thus it is novel, unique and abundantly non-obvious to couple a pigmented adhesive system with a low pressure disperse dye transfer printing system to produce flocked fabrics.

As one who has practiced in the field of textile engineering for over 30 years and one who has been recognized by essentially all of the textile and fiber engineering professional societies for "outstanding achievement in the science of textile fiber utilization" (ASTM D-13 Harold DeWitt Smith Award – 1998) and "Award for

Distinguished Achievement in Basic or Applied Fiber Science" (The Fiber Society Award – 1988) **it is my unequivocal expert judgment that the invention taught in '021 is not obvious in any fashion.**

I have reviewed the body of patent literature listed in the table below. While there is mention of transfer printing in some of these patents and there is mention of the use of pigmented adhesives in other patents, except for US Patent 5,981,021, the patent assigned to Microfibres, Inc. there is no mention, teaching or reference to the unique, novel and non-obvious product consisting of a transfer printed, flocked fabric which includes a textile substrate, raised nylon fibers on the substrate, a black-pigmented adhesive adhering the nylon fibers to the substrate and disperse dye distributed in a pattern in upper portions of the nylon fibers being colored only by disperse dye, thereby forming a deep, dark, crock-fast, colored print. **Further, there is no indication that Claims 1-20 of '021 infringe on any of the noted patents or that any of the claims have been practiced by any entity before its conception by the inventor no later than March 21, 1991 or within one year of the patent application date which was July 31, 1992.**

Patent #	Title	Inventor
2,308,429	Flock Finished Fabric	Smith
3,099,514	Color-Printed Flocked Fabrics	Haber
3,568,594	Rotary Printer for Applying a pattern to a Flocked Sheet	Johnston
3,867,171	Adhesive Color Printing System For Floor Coverings and other Home Furnishing Fabrics	Ellsworth
3,999,940	Multicolored Pile Materials and Processes for Making the Same	Freeman
4,018,956	Method of Making a Differentially Shrunk Flocked Fabric and Flocked Fabric Product	Casey
4,035,532	Transfer Flocking and laminates Obtained Therefrom	Gregorian
4,049,374	Simultaneous Transfer Printing and Embossing or Surface Texturing Method	Retjo
4,108,595	method for Coloring Textile Fabrics Produced Therefrom	Pappas
4,233,027	method for Printing and Flocking Fabrics Simultaneously	Albero
4,294,577	Dyed Flocked Fabric and method of Making the Same	Bernard
4,309,179	Flexographic Printing on Textiles	Heuser
4,314,813	Flock Transfer Sheet and Flock Transfer Printing Process	Masaki
4,319,942	Radiation Curing of Flocked Composite Structures	Brenner
4,427,414	Method of Making Colored Short Pile Fabrics	Orton
4,483,951	Radiation Curable Adhesive Compositions and Composite Structures	Brenner
4,666,771	Microbubble-Filled Article such as a Pressure Sensitive Tape	Vesley
4,895,748	Flocked Foam Fabric With Flattened Fibers Which are Color Printed	Squires
4,963,422	Ethylene Vinyl Acetate Alkyl Acrylate Compositions for Flocking Adhesives	Katz

5,401,562	Paper Material and Photosensitive Materials and Method for Producing the Same	Akao
5,508,111	Adhesive Composition	Schmucker
5,543,195	Flocked Woven Fabric with Flattened Flock Fibers	Squires
5,756,180	Flocked Fabric Suitable as Outerwear	Squires
5,863,633	Flocked Fabric with Water Resistant Film	Squires
5,981,021	Transfer Printing Flocked Fabric	McCullogh

In conclusion, I attest that all of the judgments and opinions stated above are my expert opinion. I reserve the right to supplement my analysis in light of any critique offered by Intermark or its experts and to provide a rebuttal report.

Signed under pain and penalties of perjury,

David Brookstein August 19, 2003

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