Sealed air company hbs case

Business, Company

For the exclusive use of M. HUSSAINHarvardBusiness School 9-582-103 Rev. September 24, 1985 Sealed Air Corporation The president and chief executive officer of Sealed Air Corporation, T. J. Dermot Dunphy, explained the firm’s 25% average annual growth in net sales and net earnings from 1971 to 1980: The company’s history has been characterized by technical accomplishment and marketleadership. During the last 10 years we built on our development of the first closed-cell, lightweight cushioning material, introduced the first foam-in-place packaging system, and engineered the first complete solar heating system forswimmingpools.

We intend to follow the same management guidelines in the 1980s. We intend to seek market leadership because market leadership optimizes profit, and foster technological leadership because it is the only long-term guarantee of market leadership. In July 1981 Barrett Hauser, product manager of Sealed Air’s Air Cellular Products, was reflecting on Dunphy’s managementphilosophyas he considered how Sealed Air should respond to some unanticipated competition in the protective packaging market.

As product manager, Hauser was responsible for the closed-cell, light-weight cushioning material that Dunphy had mentioned. Sealed Air’s registered trademark name for this product was AirCap. 1 AirCap cushioning materials had always faced a variety of competitors in the protective packaging market. More recently, however, several small regional producers had invented around Sealed Air’s manufacturing process patents and begun to market cheap imitations of AirCap in the United States. AirCap Cushioning and Its Competitors

AirCap cushioning was a clear, laminated plastic sheet containing air bubbles of uniform size (see Exhibit 1). The feature that differentiated AirCap cushioning from all other bubble products was its “ barrier-coating”: each AirCap bubble was coated on the inside with saran. This greatly increased air retention, meaning less compression of the material during shipment and, consequently, better protection. Barrier-coating and its customer benefits had been the central theme of Sealed Air’s AirCap cushioning selling effort for 10 years. Sealed Air, AirCap, and Instapak are registered ® trademarks of Sealed Air Corporation. Solar Pool Blanket is a TM trademark of the same corporation. Robert J. Dolan, associate professor, prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. Certain nonpublic data have been disguised.

Sealed Air licensed Astro to use Sealed Air’s patentedtechnology. Astro produced two types of bubbles: a barrier bubble similar to AirCap, 2 and an uncoated bubble. Its sales were split about evenly between the two. In 1980 Astro’s total U. S. sales were approximately $10. 5 million, compared with $25. 35 million in U. S. sales for AirCap cushioning. Sealed Air’s marketeducationhad made customers aware of the advantages of coated bubbles; consequently, uncoated bubbles had never achieved greater than a 15% dollar share of the U.

S. market before 1980. In July 1981 uncoated bubble operations were being set up in Ohio, California, and New York. GAFCEL, which served the metropolitan New York market, was the only competitor yet to achieve significant sales volume. Two GAFCEL salespeople—one full time, the other about half time—had reached a $1 million annual sales rate. Several of AirCap’s distributors had taken on the GAFCEL line. Hauser was preparing to recommend Sealed Air’s reaction to these somewhat unanticipated competitors.

The firm could produce an uncoated bubble as cheaply as GAFCEL within a month with no major capital investment; it could run on machines used for another Sealed Air product. If Hauser were to recommend that the historic champion of barrier-coating offer an uncoated bubble, he would have to specify timing, the marketing program for the new product, and any adjustments in policies for AirCap cushioning and Sealed Air’s other products. As Hauser thought about his options, he again flipped through the training manual recently distributed to Sealed Air’s sales force: “ How to Sell against Uncoated Bubbles. ”

The Protective Packaging Market The three major use segments of the protective packaging market were: 1. Positioning, blocking, and bracing: These protective materials had to secure large, heavy, usually semirugged items in a container. Typical applications included shipment of motors and computer peripherals. 2. Flexible wraps: These materials came under less pressure per square foot. Applications included glassware, small spare parts, and light medical instruments. 3. Void fill: These materials were added to prevent movement during shipping when an item and its protective wrap (if any) did not fill its carton.

The positioning, blocking, and bracing market was unique because of the heavier weights of items shipped. Flexible wrap and void fill were sometimes hard to separate because it was convenient to use the same product for both functions. The key distinction was that loose fills (for instance, polystyrene beads) dominated the void fill market but provided no cushioning protection and, hence, did not qualify as flexible wrap. Until 1970 most materials used for protective packaging were produced primarily for other purposes. Heavy, paper-based products had dominated the market. Sealed Air was one of the first Astro’s barrier bubble and the AirCap bubble differed in both manufacturing process and coating material. Astro used nylon rather than saran. The basic idea of reinforcing the polyethylene bubbles to improve air retention was, however, the same. 2 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN Sealed Air Corporation 582-103 companies to approach the market with a

customer orientation, i. e. , it began product development with an assessment of packagers' needs.

Since then a variety of products specifically designed for protective packaging had appeared. Sealed Air served these markets with two products: 1. Instapak® foam-in-place systems (1980 worldwide sales of $38. 8 million) could accommodate any application, though their most advantageous use was for heavy items. In this process two liquid chemicals were pumped into a shipping container. The chemicals rapidly expanded to form a foam cushion around the product. Instapak's comparative advantage resulted in a majority of applications in positioning, blocking, and bracing. . AirCap bubbles (1980 worldwide sales of $34. 3 million) primarily served the flexible wrap and void fill markets. In addition to coated and uncoated polyethylene air bubbles, there were two major competitors in these markets: paper-based products (cellulose wadding, single-face corrugated, and indented kraft), and foams (polyurethane, polypropylene, and polyethylene). An excerpt from an AirCap promotional brochure in Exhibit 2 shows how Sealed Air positioned AirCap as a cost-effective substitute for these competitive products and loose fills.

The brochure first pointed out the cost savings from AirCap cushioning, then presented results of " fatigue" and " original thickness retention" tests to demonstrate AirCap's protective superiority. Exhibit 3 compares products competitive with AirCap cushioning and Exhibit 4 gives their U. S. list prices, which represent relative costs for any order size from an end user. Quantity discounts were offered on all materials. Buying Influences The proliferation of

packaging products and the lack of easily demonstrable universal superiority caused confusion among end users.

For example, products such as pewter mugs were shipped around the United States in AirCap cushioning, Astro coated bubbles, or even old newspapers. Users were a varied lot. Some bought on a scientific price/performance basis. They understood “ cushioning curves” such as those in Exhibit 5. Sealed Air could provide independently measured cushioning curves for competitive products as well as its own. Regardless, many firms did their own testing. At the other end of the spectrum were firms with “ a purchasing-department mentality,” as some packaging materials suppliers put it.

Price per square foot was their first consideration, delivery their second. As one Sealed Air executive commented, “ To these people, cushioning curves are like accounting numbers. They think you can make them say anything you want. ” There were no systematically collected data on the buying process or the extent to which price dominated performance in the purchase decision. Based on his experience as a district sales manager and now product manager, Hauser guessed that a packaging engineer influenced about 40% of the material purchase decisions. 3 This document is authorized for use only by Md.

Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN 582-103 Sealed Air Corporation The U. S. Market In 1980, dollar sales by segment in the U. S. protective packaging market were: • • • Positioning, blocking, and bracing: $585 million Flexible wrap: $126 million Void fill: $15. 6 million Exhibit 6 breaks down total sales for the flexible wrap market by product

type for 1975, 1978, and 1980. AirCap cushioning annual sales in the United States since 1972 were: Year 1972 1973 1974 1975 1976 Gross Sales (in millions) $7. 10. 0 13. 0 12. 8 14. 6 Year 1977 1978 1979 1980 Gross Sales (in millions) $16. 4 18. 4 21. 2 25. 3 Despite the high cost of coated bubbles relative to the uncoated product, Sealed Air had kept most of the U. S. air bubble market. Key factors were Sealed Air's patent protection and licensing of only one competitor, extensive market education, and the packaging mentality in the United States. Packaging engineers enjoyed a status in U. S. organizations not accorded them elsewhere. Packaging supplies were viewed as a productive, cost-saving resource.

In contrast, recent research by Sealed Air indicated that many European firms viewed packaging supplies as " expendable commodities. " The European Market Sealed Air had manufacturing operations in England and France and a sales organization in Germany. 3 It was the only company selling a coated product in these countries. Sales figures for 1980 were: Country England France Germany Total Bubble Sales $3, 649, 000 4, 480, 000 7, 688, 000 AirCap Sales $2, 488, 500 592, 200 404, 600 3 The firm also had a manufacturing facility in Canada and a sales organization in Japan.

Sealed Air licensees operated manufacturing facilities in Australia, Mexico, South Africa, and Spain. 4 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN Sealed Air Corporation 582-103 Table A Differing Grades of AirCap Cushioning Bubble Heights SB: SC: ST: SD: 1 8 / in. high, used for surface protection when cushioning requirements were minimal. 3/16 in. high, used primarily

for wrapping small, intricate items, possibly for larger items if not very fragile. 5 16 / in. igh, used in same kinds of applications as SC grade, except with slightly greater cushioning requirements. Also used as a void fill. / in. high, used for large, heavy, or fragile items or as a void fill. 1 2 Plastic Film Thicknesses Light duty (110): each layer of film was 1 mil (1/1, 000 of an inch) thick; used for light loads. Regular duty (120): one layer of 1 mil and one layer of 2 mils; for loads up to 50 lbs. per sq. ft. Heavy duty (240): one layer of 2 mils and one of 4 mils; for loads up to 100 lbs. per sq. ft. Super duty (480): one layer of 4 mils and one of 8; for loads over 100 lbs. er sq. ft. England. Sealed Air had developed the protective packaging market here and had good distribution. Later on, Sansetsu, a Japanese firm, began marketing a high-quality uncoated product made in Germany. Prices for the uncoated bubble were 50% less than the cost of comparably sized AirCap cushioning. Sansetsu and other uncoated bubble manufacturers had chipped away at Sealed Air’s one-time 90% market share. The most pessimistic Sealed Air distributors estimated that the firm would lose 50% of its current market share to uncoated bubbles within three years. France.

Here, Sealed Air owned an uncoated bubble manufacturer SIBCO, with sales of $750, 000 in 1980. In 1972 SIBCO was the only marketer of uncoated bubbles in France. Two major competitors, one with superior production facilities, had entered the market. Uncoated bubbles were priced about 40% lower than AirCap, and price was the key buying determinant. The major French distributor of AirCap cushioning had a 50-50 mix of coated and uncoated sales in 1978. In 1980 the mix had changed to 70-30 (uncoated

over coated), with 90% of new bubble applications being uncoated. Germany.

AirCap cushioning was a late entrant (1973) to the German market and never held commanding share. Moreover, from 1978 to 1980, it had lost share at a rate of 20% to 30% per year. Sansetsu had an efficient manufacturing facility in Germany and sold approximately $6 million of uncoated product in 1980. (The price for uncoated was about 35% less than for coated.) AirCap Cushioning Grades and Sales AirCap cushioning grades differed in bubble height and thickness of the plastic films. Bubble heights were designated by a letter code, and the plastic films came in four thicknesses (see Table A).

Sealed Air produced eight different height/thickness combinations (see Table B). Some of the known end uses for each grade are shown in Exhibit 7. 5 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN 582-103 Sealed Air Corporation Table B Eight Different Height/Thicknesses by Sealed Air Thickness Height (inches) SB-1 8 110 X 120 X X X 240 X X X 480 / SC-3/16 ST-5 16 SD-1 2 / / X Table C AirCap Sales by Grade Sales in 1, 000 Square Feet Grade 1/8 in.

SB-110 3/16 in. SC-120 SC-240 5/16 in. ST-120 ST-240 1/2 in. SD-120 SD-240 SD-480 Total sales July–December 1979 59, 128 76, 349 5, 036 31, 912 4, 369 44, 252 25, 202 3, 138 249, 386 January–June1980 48, 513 81, 014 4, 426 42, 234 3, 914 43, 624 21, 799 1, 358 246, 882 Note: In addition, because SB-110 could not compete in price against foams for many surface protection applications, Sealed Air introduced an A-100 grade in January

1980. The A-100 bubble was 3/32 in. high—the shortest coated bubble Sealed Air could make with available technology. January to June 1980 sales of A-100 were 17, 802, 000 sq. ft.

Sales by grade for the last six months of 1979 and the first six months of 1980 are shown in Table C. Pricing All AirCap cushioning was sold through distributors. Prices reflected Sealed Air's costs and the prices of competitive products. Variable costs and prices to the distributor are shown in Table D. Sealed Air's suggested resale price list is shown in Exhibit 8. Largely because of its selective distribution policy, distributors generally followed this list. The price schedule entailed quantity discounts for end users. Thus, distributor margins varied with the size of the customer's individual order. Quantity price was determined by the total square footage of a single order, combining all grades, ordered for shipment at one time to a single destination.) In some major metropolitan areas, up to 50% of AirCap business was truckload/railcar orders by end users. In this event Sealed Air shipped the material from its plant directly to the end user; the distributor received a 10% margin and handled user credit and technical service. In some markets the percentage of direct shipments was as low as 10%. 6 This document is authorized for use only by Md. Saquib Hussain in marketing ? al taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN Sealed Air Corporation 582-103 Selling Effort Sealed Air's U. S. operation consisted of 7 regional manufacturing operations, 62 salespeople (each selling AirCap cushioning, Instapak, and other Sealed Air products), and 370 distributors. To control the shipping cost of its bulky product, Sealed Air had regional manufacturing operations in

three eastern states, Ohio, Illinois, Texas, and California. The regional presence, however, had proven to be an effective sales promotion device as well.

Table D AirCap Variable Costs and Distributor Prices (in dollars per 1, 000 sq. ft.) (1) Total Variable Cost $13. 78 16. 01 20. 56 32. 47 30. 65 38. 12 36. 31 44. 45 70. 81 (2) Price to Distributor for Truckload Deliverya $20. 60 30. 25 43. 50 56. 30 51. 40 65. 35 65. 35 78. 60 140. 90 (2) - (1) Sealed Air Dollar Margin $6. 82 14. 24 22. 94 23. 83 20. 75 27. 23 29. 04 34. 15 70. 09 Grade A-100 (3/32 in.) SB-110 (1/8 in.) SC-120 (3/16 in.) SC-240 (3/16 in.) ST-120 (5/16 in.) ST-240 (5/16 in.) SD-120 (1/2 in.) SD-240 (1/2 in.) SD-480 (1/2 in.) Manufacturing $12. 46 14. 02 17. 92 29. 83 25. 36 32. 83 28. 38 36. 52 62. 88

Freight $1. 32 1. 99 2. 64 2. 64 5. 29 5. 29 7. 93 7. 93 7. 93 a Less than truckload shipments were priced 15% to 20% higher. Consequently, distributors almost always ordered in truckload quantities. They were allowed to mix grades within an order. Depending on the grade ordered, a truckload could contain 70, 000 sq. ft. (all SD-480) to 420, 000 sq. ft. (all A-100). Before Instapak was acquired in 1976, 28 salespeople devoted 90% of their time to AirCap cushioning products. In 1981 the 62-person force was expected to allocate time as follows: 60% to Instapak systems, 35% to AirCap cushioning, and 5% to other Sealed Air products. Exhibit 9 shows Sealed Air sales by product line and other financial data.) Part of Sealed Air’s market share leadership philosophy was a consultative selling approach. Salespeople spent about half their time making cost studies at end-user locations. With the help of Sealed Air’s packaging labs, salespeople

attempted to show how their products could save on material and labor cost and reduce damage in the end user's particular situation. Distributors' salespeople took orders on AirCap cushioning but did little to demonstrate AirCap use and application to customers.

If a distributor's salesperson identified a potential AirCap account, he or she would inform the Sealed Air salesperson and a joint call would be arranged. In this way the potential account learned about the product and ordering procedures simultaneously. Distributors sometimes complained to Sealed Air about the level of AirCap selling effort. Since distributor's margins on AirCap cushioning were generally higher than the 10% to 12% for Instapak sales, distributors were not happy with Sealed Air's greater allocation of salesperson time to Instapak.

Some distributors said they would be content if the salesperson in their area really allocated 35% to AirCap; some claimed the actual AirCap selling effort amounted to only 20%. Instapak's sales growth had been impressive, but some Sealed Air executives felt this had cost them some distributor satisfaction. Both distributors and end users regarded Sealed Air's salespeople as among the best trained and most knowledgeable in the packaging industry. Sales force salaries were above average. They were composed of a base salary plus commissions of 2% on net AirCap sales and 1% on net sales of all other products, including Instapak. As an added incentive Sealed Air gave salespeople $75 for each Instapak dispenser placed. It took back $75 for each one removed.) In a typical week a salesperson called on 20 end users and checked in with two or three distributors. 7 This document is authorized for use only by Md. Saquib

Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN 582-103 Sealed Air Corporation U. S. Distributors During the 1970s Sealed Air invested heavily in developing a selected distributor network. The firm had 370 distributors by 1980.

Sealed Air considered 135 of these their " first-line distributors" because they collectively handled over 80% of its business. The 20 largest AirCap distributors handled about 35% of the business. Larger distributors typically carried both Instapak foam-in-place and AirCap cushioning. The largest distributor of Sealed Air products had 1980 Sealed Air sales of approximately $2 million, just about half of which were AirCap. Distributors traditionally tried to be full-line houses—capable of meeting each customer's complete packaging needs—so they carried a broad range of products.

A survey of Sealed Air's firstline distributors showed that 83% carried loose fills, 65% carried polyethylene foam, and 29% carried Du Pont's polypropylene foam. Although most carried competitive products, distributors had displayedloyaltyto Sealed Air and AirCap cushioning. Sealed Air, in turn, had kept to its selective distribution policy. Competing Uncoated Bubble Cushioning Sealed Air considered both types of bubbles made by Astro as inferior products. GAFCEL, the new regional producer, made a " decent product" in Hauser's estimation; he felt that its success to date came largely at Astro's expense.

The New York metropolitan market was ideal for the new producer. It was not customer- or distributor-loyal, and price was a key variable. Sealed Air's estimate of GAFCEL sales rates was $750, 000 per year for the 1/2-in. -high

uncoated bubble and $250, 000 per year for the 3/16-in. bubble. Both had two layers of film 2 mils each. GAFCEL's distributor prices for truckload shipments and suggested resale prices to end users for the metropolitan New York market are shown in Table E. (Astro's uncoated bubble prices are in Exhibit 4.) Sealed Air had not yet extensively tested the GAFCEL uncoated bubble.

Although it was better than Astro's uncoated, its performance would not be dramatically different from that found in previous uncoated testing (see Exhibit 2). In terms of cushioning curves, the l/2 in. GAFCEL bubble was comparable to Sealed Air's ST-120 or SD-120 for very light loads, not greater than 0. 15 lbs. /sq. in. pressure. At greater loads, however, the acceleration curve would increase rapidly, moving above even the SB-110 by pressures of 0. 25 lbs. /sq. in. (see Exhibit 5). 8 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012.

For the exclusive use of M. HUSSAIN Sealed Air Corporation 582-103 Table E GAFCEL's Distributor Prices per 1, 000 Sq. Ft. SO-22 (3/16 in.) LO-22 (1/2 in.) $36. 03 Distributor truckload Suggested resale by order size: 1, 000 sq. ft 20, 000 sq. ft 40, 000 sq. ft 100, 000 sq. ft Truckload $31. 63 $56. 54 47. 12 42. 84 39. 40 34. 79 $75. 24 62. 70 57. 07 44. 68 39. 63 Sealed Air Decisions Sealed Air had conducted a good deal of research on manufacturing uncoated bubble products. It knew the best production process would be similar to that currently used for its Solar Pool Blankets™.

Thus, the firm could begin manufacture of an uncoated product quickly in its New Jersey plant. Likely distributor response to a Sealed Air uncoated

product was difficult to predict. Some distributors had requested it, but others regularly complained that there were already too many coated grades. Preliminary estimates of the variable costs for producing Sealed Air uncoated bubbles were $19 per 1, 000 sq. ft. for 3/16 in. height, $20 per 1, 000 sq. ft. for 5/16 in. , and $21 per 1, 000 sq. ft. for 1/2 in. Freight cost depended on bubble height and distance shipped.

Although GAFCEL’s production process was completely different, its production costs were believed to be comparable. Hauser now had to decide whether to recommend that Sealed Air enter the uncoated bubble market (with an about-face on its previous exclusive emphasis on coated bubbles), or whether to suggest some other reaction to its new competitors. 9 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN 582-103 Sealed Air Corporation Exhibit 1 AirCap® Products and Uses

Cushioning AirCap® air bubble cushioning protects products against shock and vibration during handling and shipping by literally floating them on a cushion of air. This material offers consistent performance because our unique barrier-coating guarantees air retention. AirCap withstands repeated impact since it will not fatigue or take a compression set. Cushioning applications include a range of products from lightweight retail items to delicate power supplies weighing several hundred pounds. Choose the grade that best fits your cushioning application! Protective Wrap/Interleaving

AirCap is an excellent “ protective wrap” material and ideal for “ interleaving” between similarly shaped items. It is clean, non-abrasive, easy

to use and provides superior surface protection. Lay your product on AirCap sheeting, fold it over and your product is fully protected! Typical protective wrap/interleaving applications include china, glassware, printed circuit boards, and spare parts. Void Fill When a void in a package is not completely filled, the cushioned product may migrate within the shipping container. This movement is a major cause of damage in transit.

Since large regular-duty AirCap bubbles do not compress, they fill voids effectively and eliminate product movement. Simply stuff AirCap sheeting into the carton, (left) or use an economical rolled “ log. ” It’s easy, clean, lightweight, and cost efficient! 10 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. 582-103 -11- Exhibit 2 Sealed Air Presents AirCap as Cost-Effective Substitute Typical Cost-Savings Comparisons 60 Cellulose Wadding Rubberized Hair Type IV Resists Fatigue 50 40 0 Uncoated Bubbles Urethane Foam Polypropolene Foam AirCap % Increase in Shock 20 In the transportationenvironmentpackages are subjected to many jolts, bumps, and shocks that can potentially cause damage. To function effectively a cushioning material must retain its ability to protect over a series of repeated impacts. The loss of protective ability during repeated impact is termed ‘ material fatigue. ’ This graph (left) indicates the increased shock an average procut (0. 25 psi) will receive during a ten drop sequence from 24 inches. Test results show barrier-coated AirCap® outperforms all materials tested. 0 0 1 Number of Impacts 2 3 4 5 6 7 8 9 10 BARRIER-COATING Each individual AirCap bubble is barriercoated to retain the air. AirCap Vs. Corrugated Inserts A distributing firm found that it

needed an excessive amount of flowable to prevent product migration. A new AirCap package (left) using a simple criss-cross technique resulted in reduced material, shipping, labor and carton costs. Item Carton Inner packaging Labor Freight Total Cost Savings w/ AirCap IMMEDIATE THICKNESS LOSS AirCap retains its original thickness upon the immediate application of a load (See Below).

Loose Fill Package $. 73 . 75 . 42 3. 02 $4. 92 AirCap Vs. Loose Fills Material Tested A manufacturer using corrugated inserts, cellulose wadding and polyethylene bags eliminated the need to inventory many packaging components (right) and reduced labor 84% by switching to AirCap (left). Total Thickness Loss Retains Original Thickness Item Carton Inner Packaging Labor Freight Total Cost Savings w/ AirCap Corrugated Package $. 55 . 80 . 83 2. 60 $4. 78 AirCap Package $. 55 1. 05 . 13 2. 40 $4. 13 $. 65 AirCap Package $. 47 . 54 . 25 2. 72 $3. 98 $. 94

AirCap SD 240 14% Polypropylene Foam 30% Polyethylene Foam 40% Cellulose Wadding 38% Rubberized Hair IV 51% Uncoated Bubbles 64% (Large) Urethane Foam (1. 25 53% * * pct) Embossed 54% * * Polyethylene (Hex) *30 day evaluation not conducted due to excessive initial thickness loss. Initial Thickness Loss Upon 04 psi Load 7% 19% 16% 26% 24% 14% Gradual Thickness Loss After 30 Days 7% 11% 24% 12% 27% 50% When a load is placed on a cushioning material two things occur that may contribute to a deterioration in its performance. First, is the immediate compression of the material.

Second, is the additional, more gradual loss of thickness termed ‘ creep. ’ Generally excessive thickness loss of a material results in increased material

usage in cushioning and dunnage applications. Creep may contribute to product damage as the loss of thickness creates a void in a package, allowing the product to move, shift, or migrate. This chart (left) demonstrates how barrier-coated AirCap retains its original thickness better than all materials tested and provides product protection throughout the entire packaging, shipping, handling, and storage cycle.

GRADUAL THICKNESS LOSS (CREEP) AirCap’s unique barrier-coating retains the air more effectively than uncoated bubbles, eliminating creep. AirCap Vs. Thin-Grade Foams AirCap Vs. Cellulose Wadding A metering firm discovered it needed only half as much AirCap to achieve the same performance that cellulose wadding provided (right). In addition to lowering material costs, AirCap (left) is clean, lint free, non-abrasive, and lightweight. Item AirCap Package An electronic service center employing the use of a thin-grade foam (right) required many layers of wrapping to protect against shock and vibration.

Large AirCap bubbles (left) provided superior performance and lower packaging costs. This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. Carton Inner Packaging Labor Freight Total Cost Savings w/ AirCap Cellulose Wadding Package $. 30 . 22 . 25 1. 35 $2. 12 $. 22 . 12 . 08 1. 20 $1. 62 $. 50 CONVENTIONAL CELLULOSE MATERIAL UNCOATED BUBBLES Item Foam Package For the exclusive use of M. HUSSAIN Carton Inner Packaging Labor Freight Total Cost Savings w/ AirCap $. 46 1. 33 . 66 4. 09 $6. 4 AirCap Package $. 38 . 87 . 33 3. 94 $5. 52 $1. 02 For the exclusive use of M. HUSSAIN 582-103 Sealed Air Corporation Exhibit 3 1.

Competitive Product Information Cellulose wadding (a paper-based product which tries to trap air between piles of sheeting) • Major suppliers: Jiffy Packaging, Hillside, N. J. CelluProducts Co. , Patterson, N. C. • Sizes available: Thickness of 0. 17 in. , 0. 25 in. , 0. 37 in. , 0. 50 in. • Advantages/disadvantages: Much cheaper than AirCap in thin grades; will not mark item wrapped; heavier than AirCap (3–4 lbs. per cu. ft. vs. less than 1 lb. or AirCap) meaning higher shipping cost; excessive compression under heavy loads (see test results, Exhibit 2). Corrugated products (sheets of ribbed cardboard, often cut and perforated to specific sizes) • Major suppliers: About 800 firms manufacturing in 47 states, including larger paper companies. • Advantages/disadvantages: Single face (cardboard with ribs on one side) appreciably cheaper than AirCap on square-foot basis; labor cost of using corrugated usually very high; poor cushioning. Polyethylene foam (thin, smooth, rigid sheets of low-density foam) • Major suppliers: Sentinel Foam Products, Hyannis, Mass.

CelluProducts Co. , Patterson, N. C. Jiffy Packaging, Hillside, N. J. • Sizes available: 48 or 68 in. wide rolls of thickness 1/16, 3/32, 3/16, 1/4 in. • Advantages/disadvantages: Appreciably cheaper than AirCap in thin grades on square-foot basis; does not mark item wrapped; rigid product means hard to work with; tendency to tear; cushioning inferior to AirCap; more expensive than AirCap in thicker grades. Polypropylene foam (thin, coarse, rigid sheets of low-density foam) • Major supplier: Du Pont Microfoam • Sizes available: Standard 72 in. wide rolls of thickness 1/16, 3/32, 3/16, 1/4 in. Advantages/disadvantages: Basically the same as for polyethylene foam. Loose fills (expanded polystyrene beads, peanuts, etc.) • Major suppliers:

Many small firms • Advantages/disadvantages: 50% cheaper than AirCap on cubic foot basis; messy; poor cushioning. Uncoated bubbles (sheets of small air bubbles made of polyethylene film) • Major producer: Astro, Hawthorne, N. J. (Sealed Air licensee) • Sizes available: 48 in. wide roll standard, bubble heights 3/16, 1/4, 1/2 in. Bubbles also varied in the thickness of the films used. Generally, thicknesses were 1, 2, 3, or 4 mils with increasing film thickness giving greater strength. Advantages/disadvantages: Cheaper than comparable height coated bubble; excessive air loss over time (about 65% height loss under 50 Ibs. per sq. ft. pressure over 30 days vs. 15% for AirCap). Competitive coated bubble (essentially the same as uncoated bubble except nylon film coating added) • Major supplier: Astro, Hawthorne, N. J. (Sealed Air licensee) • Sizes available: 48 in. wide roll standard, bubble heights 1/8, 3/16, 1/4, 1/2, 1 in. • Advantages/disadvantages: Under heavy loading, nylon barrier holds up better than Sealed Air’s saran barrier; poor quality control (bubble heights generally 13% less than specified). . 3. 4. 5. 6. 7. 12 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN Sealed Air Corporation 582-103 Exhibit 4 Suggested End User Prices (in dollars) for Major Competitive Products 1. Paper-Based Cellulose Wadding (Jiffy Packaging) Thickness (in.) 0. 17 0. 25 0. 37 0. 50 2. Foams Thickness (in.) 1 16 Price $27. 70 37. 40 50. 60 65. 00 Single-Face Corrugated $22. 75 Jiffy Packaging (polyethylene) $20. 30 25. 90 34. 15 53. 35 na Sentinel Products (polyethylene) $18. 20 24. 00 32. 70 49. 40 na

Du Pont Microfoam (polypropylene) $17. 20 25. 17 34. 90 53. 86 109. 72 / / 1/8 3/16 3/8 3 32 3. Competitive Bubbles (Astro) Coated Nylon Bubble Height (in.) 1 8 3 16 Uncoated—Polyethylene a Film Thickness (mils) 1 and 1 1 and 2 1 and 2 1 and 2 2 and 4 1 and 2 2 and 4 Price $35. 25 49. 50 57. 00 71. 75 87. 75 90. 00 110. 00 Bubble Height (in.) 3 16 Film Thicknessa (mils) 2 and 3 2 and 3 2 and 4 Price $47. 00 54. 50 65. 75 / / 1/4 1/2 1/2 1 1 / / 1/2 1 4 Note: Prices are per 1, 000 sq. ft. based on a 50, 000 sq. ft. order. a. Each bubble is made of two layers of film. Thicknesses shown are for individual layers in mils.

Thicker film produces a stronger product. 13 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN 582-103 Sealed Air Corporation Exhibit 5 Comparative Cushioning Performance by Grade Engineered To Provide Superior Cushioning The test data on the graph below was developed by the Lansmont Corporation, an independent testing laboratory. The test method used closely simulates actual shipping conditions, and employs the use of an enclosed test block and shock machine.

Five bottom drops were executed from 24 inches at each staticstress. The last four drops were averaged to arrive at data points used to develop each cushioning effectiveness curve. This data illustrates AirCap’s superior performance over a wide range of loadings, and may be used for comparison and to specify the best AirCap grade and thickness for your cushioning requirements. (SD-240 curves taken from data provided in Military Handbook 304-A). 300 SB-110 SC-120 250 SC-120 (2 layers) Peak Acceleration (G’s)

200 SCT-120 150 SD-120 100 ST-120 (2 layers) SD-120 (2 layers) SD-120 (3 layers) SD-240 (4 layers) 50 SD-240 (6 layers) . 05 . 1 . 15 . 2 . 25 . 3 . 35 . 4 Static Stress (psi) Source: AirCap brochure. Note: To be read: For a product exerting 0. 25 lbs. per sq. in. of pressure on the packaging material while at rest, the peak acceleration (a measure of shock to the product) when dropped from 2 ft. is 118 g. if SD-120 is used, 260 g. if SB-110 is used. 14 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN Sealed Air Corporation 582-103 Exhibit 6 U. S.

Market—Flexible Wraps by Product Type (in millions of manufacturers' dollars) 1975 1978 23 25 1 49 11 5 6 22 22 93 1980 23 27 1 51 12 7 25 44 31 126 Paper-based Cellulose wadding Single-face corrugated Indented kraft Foamsa Polyurethane Polypropylene Polyethylene Polyethylene air bubbles Coated and uncoated (combined) Total Source: Company records. b 20 20 1 41 10 4 1 15 15 71 a. Sales figures exclude nonpackaging uses, such as construction and furniture industries. b. Figures are for flexible wrap market only and are therefore less than AirCap's and Astro's total U. S. sales. Exhibit 7 Grade SB-110

AirCap Applications by Grade Package Contents Furnace thermostats Shorthand machines Taco shells Tempered glass sheets Clocks Wooden picture frames Light fixtures Overhead projector lenses Computer components Telephone bell ringers Amplifiers Saucepans Two-way radios Exit alarms Mixers Fryers Carbonless paper rolls Oven burners Pharmaceutical bottles Candleholders Recorders Carburetors Lamps Gallon

jugs Computer terminals Printed circuit boards Foil wallpaper Blood coagulation timers Leaded glass windows Custom motorcycle seats Motor controls Shredded paper Packaging Material Displaced (if known) 16-in. Corrugated / polypropylene foam SC-120 SC-240 ST-120 Shredded paper Corrugated Corrugated Corrugated / polyethylene foam Corrugated Urethane foam pads 3 32-in. ST-240 SD-120 Polypropylene foam SD-240 Corrugated Foam pads and corrugated Corrugated Astro uncoated bubble LP-24 SD-480 15 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN 582-103 Sealed Air Corporation

Exhibit 8 Suggested U. S. Resale Price List, Effective March 1980 Sq. Ft. per Order per Single Destination 1, 000 or more 5, 000 ” ” 10, 000 ” ” 30, 000 ” ” 50, 000 ” ” Truckload/railcar 1, 000 or more 5, 000 ” ” 10, 000 ” ” 30, 000 ” ” 50, 000 ” ” Truckload/railcar 1, 000 or more 5, 000 ” ” 10, 000 ” ” 30, 000 ” ” 50, 000 ” ” Truckload/railcar 1, 000 or more 5, 000 ” ” 10, 000 ” ” 30, 000 ” ” 50, 000 ” ” Truckload/railcar 1, 000 or more 5, 000 ” ” 10, 000 ” ” 30, 000 ” ” 50, 000 ” ” Truckload/railcar Same price per 1, 000 sq. t. as SD-120 1, 000 or more 5, 000 ” ” 10, 000 ” ” 30, 000 ” ” 50, 000 ” ” Truckload/railcar 1, 000 or more 5, 000 ” ” 10, 000 ” ” 30, 000 ” ” 50, 000 ” ” Truckload/railcar 1, 000 or more 5, 000 ” ” 10, 000 ” ” 30, 000 ” ” 50, 000 ” ” Truckload/railcar $107. 85 97. 70 87. 55 81. 40 79. 35 72. 40 130. 75 118. 30 105. 95 98. 55 95. 70 87. 25 232. 75 210. 55 188. 35 175. 55 171. 25 $155. 60 Price per 1, 000 Sq. Ft. $34. 30 30. 85 27. 45 25. 70 24. 75 22. 80 50. 00 45. 40 40. 90 38. 10 37. 05 33. 50 71. 0 64. 55 57. 40 53. 75 52. 60 47. 65 93. 40 84. 40 74. 95 70. 20 68. 60 62. 25 85. 30 77. 10 68. 50 64. 25 62. 75 $57. 25 Item (thickness in

inches) A-100 (3/32) SB-110 (1/8) SC-120 (3/16) SC-240 (3/16) ST-120 (5/16) ST-240 (5/16) SD-120 (1/2) SD-240 (1/2) SD-480 (1/2) 16 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012. For the exclusive use of M. HUSSAIN Sealed Air Corporation 582-103

Exhibit 9 Selected Financial Data ($ thousands) 1976 1977 $21, 422 15, 489 3, 595 2, 682 $43, 188 35, 765 $24, 270 12, 093 (816) 6, 009 1978 $25, 028 21, 133 3, 453 4, 644 $54, 258 43, 410 $31, 111 14, 527 (738) 7, 882 1979 $29, 996 29, 056 3, 432 7, 951 $70, 435 54, 325 $43, 199 16, 855 (278) 10, 103 1980 $34, 330 38, 802 3, 688 11, 777 $88, 597 67, 344 $54, 125 21, 485 (119) 12, 868 Net sales by class of product Air cellular packaging Foam-in-place packaging Other packaging Recreational and energy prod.

Total worldwide United States Costs and expenses Cost of sales Marketing, administration, development Other income (expense) Earnings before income tax $18, 872 3, 049 4, 553 $26, 474 – $16, 451 6, 696 32 3, 359 Source: Sealed Air Annual Reports 1979, 1980. 17 This document is authorized for use only by Md. Saquib Hussain in marketing ? nal taught by Suresh Ramanathan from October 2012 to October 2012.