Letter to Shareowners

We create chemistry to help our customers grow their businesses.

Dear Shareowners, Colleagues and Customers,

In 2005, Grace successfully continued to embrace change and took important steps toward becoming a faster, more agile and more tightly integrated specialty chemicals and materials company. We continue to drive integration through the organization, extending our global reach into fast-growing emerging markets, and devoting more resources to inventing new products. And we are doing all of these things for just one reason - to be the best at delivering the products and services our customers need, wherever they do business.

It is hard to imagine a year when we accomplished so much in the face of so many challenges. A trio of hurricanes - particularly Rita - and rampant inflation in the prices we pay for raw materials tested our ability to meet the expectations we set out at the start of 2005. They tested our mettle, and our company emerged stronger.

Hurricane Rita dealt a blow to our catalyst manufacturing facility in Lake Charles, Louisiana, closing the plant for two weeks and causing significant damage. Though no lives were lost, many of our employees lost their homes and possessions.

I am very proud of the way our company responded. Employees from around the world contributed to the Rita Foundation, established on a very short timeline by our legal and human resources teams, to help our colleagues in Lake Charles find new homes and replace their belongings. Including company contributions, the fund raised more than \$375,000.

Meeting the catalyst needs of our customers was also a priority. From the back office, where supply chain specialists worked to establish new distribution routes, to the catalyst manufacturing plants in Maryland and Germany that stepped up production, everyone contributed to overcoming the impact of Rita.

Our financial results showed equal resiliency. In 2005, we delivered our sixth straight year of topline growth.

For the year, sales topped \$2.5 billion, nearly 14 percent improvement over the previous year. Sales growth was strong in all four quarters, across businesses and in all geographic regions.

Productivity remains a central part of our strategy. Our ability to control costs and maximize our production capacity has been particularly important for the past several years, as the cost of energy and other raw materials continue to escalate. In 2005, we placed new emphasis on speed as a core operating principle, incorporating Lean productivity tools - which reduce complexity and eliminate non-valued activities - into our Six Sigma programs.

Drawing on the strength of our sales performance, acquisition strategy and productivity programs, we ended the year with higher operating income, which grew more than 12 percent to \$201 million. Net income for 2005 was just over \$67 million, or \$1 per diluted share.

We also had another year of strong safety performance in 2005. Eighty facilities achieved impressive safety records during the year - up from 51 in 2004 - for operating extended periods without recordable or lost time injuries. The U.S. Occupational Safety and Health Administration recognized our catalyst production facility in Lake Charles with its prestigious "Star" Voluntary Protection Program award.

Innovation and the introduction of new products continue to be one of the most important drivers of our growth. In fact, about 26 percent of our revenue last year came from products introduced in the past five years. Our research labs have generated an impressive output of innovative new products, and we plan on increasing our investment in Research and Development in 2006.

We have much to be proud of in these results. At the same time, we have a great deal of opportunity and we are aggressively positioning ourselves to take the fullest advantage of it.

Integrating our businesses into one, unified Grace is perhaps one of our most important objectives. This effort, started in 2004, makes us stronger. By streamlining processes and sharing best practices across the company, we are better able to navigate the evolving business environment, better able to innovate, and better able to help our customers grow their businesses.

We are continuing to extend our global footprint to better serve our customers wherever they do business. While we are well established in North America, Western Europe and other developed nations, emerging markets have a significant need for our products. In September, we opened our new Asian headquarters in Shanghai and a technical center, our third, in Beijing. Though we have had a presence in China since 1986 and have looked to Asia as a key market throughout our history, this is a significant investment in our global growth.

And just before year's end, we expanded our operations in the Middle East with new leadership in the region and an agreement through our joint venture with Chevron Products Company (Advanced Refining Technologies) and the Kuwait Catalyst Company to manufacture specialized catalysts that help produce environmentally friendly fuels. The Middle East's dominance in the oil industry and its fast growing construction industry offer natural opportunities for our businesses.

During the year our leadership team underwent changes. In May, Paul Norris stepped down as president and CEO, but remains as non-executive Chairman of the Board of Directors. Paul led Grace through a challenging environment. We will all miss his leadership, but we are pleased to have the benefit of his contributions.

On balance, we had a strong 2005 with more than our share of achievements. We still have, however, some persistent challenges in front of us. We were greatly disappointed when the U.S. Department of Justice indicted Grace and seven current and former employees for actions related to our former vermiculite operations in Libby, Montana. We will defend our company when the trial begins this September.

Our Chapter 11 reorganization is progressing steadily. During the year, the court issued a number of important orders that established a process for estimating the value of our asbestos liabilities. This represents a significant step in our efforts to emerge from bankruptcy.

In all that Grace faces today, we have not lost sight of the one thing that has carried us through the years. Creating the chemistry that helps our customers grow will always be at the center of everything we do. Around the world, there are 6,400 individuals working every day to ensure that our customers benefit from every interaction they have with Grace.

I am extremely proud to be Grace's seventh CEO. It is a company with a long, distinguished history that continues to make significant contributions. We are working hard to be counted among the best in our industry in everything we do - operations, innovations and financial performance. We are investing in the tools and processes that will make us stronger. And we have the right people to get the job done.

Sincerely,

Fred Festa

President & CEO

FINANCIAL HIGHLIGHTS Amounts in millions, except per share data	2005	2004	2003
NET SALES	\$2,569.5	\$2,259.9	\$1,980.5
PRE-TAX INCOME FROM CORE OPERATIONS BEFORE INTEREST, TAXES, DEPRECIATION AND AMORTIZATION As a Percent of Sales	\$315.5 12.3%	\$288.1 12.7%	\$251.6 12.7%
PRE-TAX INCOME FROM CORE OPERATIONS As a Percent of Sales	\$201.5 7.8%	\$179.3 7.9%	\$148.7 7.5%
NET INCOME (LOSS) Diluted EPS	\$67.3 \$1.00	\$(402.3) \$(6.11)	\$(55.2) \$(0.84)
WEIGHTED AVERAGE DILUTED SHARES OUTSTANDING	67.3	65.8	65.5
NET CASH FLOW FROM OPERATING ACTIVITIES	\$54.2	\$313.0	\$110.8
TOTAL ASSETS	\$3,517.2	\$3,538.9	\$2,875.3
TOTAL LIABILITIES	\$4,112.5	\$4,160.7	\$3,039.1
LIABILITIES SUBJECT TO COMPROMISE (A Subset of Total Liabilities)	\$3,155.1	\$3,207.7	\$2,452.3
TOTAL SHAREHOLDERS' EQUITY (DEFICIT)	\$(595.3)	\$(621.8)	\$(163.8)

Environment, Health and Safety

We create chemistry with the environment in mind.

At Grace, we are dedicated to the highest standards of health and safety practices and realize our corporate responsibility to the environment. Our goal is to establish an outstanding record of leadership and strong corporate citizenship.

The figures that we report on these pages are the collective efforts of 6,400 employees in dozens of countries. We come to work each day with a focus and dedication to work smart, work safe and to take care of each other.

Our programs are planned and implemented through a corporate Environment, Health and Safety (EHS) Management System that provides the framework for our activities on a global basis. An accredited independent registrar audited the system in 2005 and certified that it complies with requirements established by the American Chemistry Council. The system sets EHS performance expectations to ensure continual improvement and addresses hazards and risks, training and communication, operational controls, compliance management, community and product stewardship, and periodic internal reviews.

Environment

Our customers and neighboring communities can be assured that we have established programs in place and that we are working to reduce the impact of our facilities and products in the global environment. We continually look for ways to improve our processes through increased recycling, waste reduction and energy savings.

We are also working to secure International Organization for Standardization (ISO) 14001 certifications at various locations. The certification process involves the identification of environmental impacts associated with our facilities and the establishment of improvement targets. We have certified sites in Spain, United Arab Emirates, Germany and United Kingdom with additional locations currently undergoing the process. We expect to add to the list in 2006.

Product stewardship is another integral part of the EHS corporate philosophy and addresses the raw materials, products, end use and life-cycle concepts of all Grace products. Our strategic planning involves the development of products that will provide the greatest benefits to our customers while minimizing their impact on the environment.

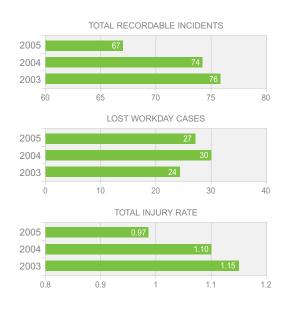


Health and Safety

Our main goal is having everyone work, think and be safe. And Grace employees had that priority in mind last year. In 2005, Grace had an Occupational Safety and Health Administration (OSHA) total injury rate of 0.97, well below the OSHA industry average of 3.3. The company achieved a 9% improvement in recordable incidents and a 10% improvement in lost time accidents, respectively, from the company's 2004 safety performance. Grace employees around the world make safety a priority each and every day.

Eighty sites and offices - more than half of the company locations - were awarded the Paul J. Norris Safety Award in 2005, the company's official recognition of locations that achieved impressive safety records. Large facilities (defined as sites that have 500,000+ hours worked per year) are eligible to receive the award if they exceed one million man hours without a lost time accident or 500,000 hours without a recordable incident. Smaller facilities are eligible if they work 24 months without a lost time accident or 12 months without a recordable incident.

We also received industry awards for our safety records, most notably, membership to OSHA's prestigious "Star"





Voluntary Protection Program for our facility in Lake Charles, Louisiana. VPP Star members achieve average injury rates that are generally 50 percent lower than other worksites in their industries. The Lake Charles facility's injury and illness rate bested the average and was 91 percent below the chemical industry in 2005. The facility is the largest producer of fluid cracking catalysts in the world and employs approximately 435 workers and contractors.

Despite the improvements and the industry recognition, EHS is a never-ending goal. We have achieved much of what we strived to do but we remain committed to continual improvement.

Recent Accomplishments

- Achieved a global, normalized OSHA injury rate of 0.97.
- Reduced recordable injuries and lost workday cases by 9% and 10%, respectively, from 2004 performance.
- Celebrated membership into OSHA's "Star" Voluntary Protection Program.
- Achieved certification of the EHS Management System by a third party registrar.
- Received International Organization for Standardization 14001 certification for our facility in Sant Boi, Spain.
- Recognized with industry awards from the Colombian Safety Council.
- Earned the Louisiana Chemical Association's Serious About Fostering Excellence Award as the "Best in Louisiana" (Class 3 site) for the second time
- Worked with the American Chemistry Council on the Responsible Care® program, a global chemical industry performance initiative that exceeds government regulations.



Community Stewardship

We create chemistry by supporting our communities.

Engage. Empower. Educate. Those three words are at the root of our corporate stewardship programs. By bringing people together in the spirit of community service, we create stronger neighborhoods and establish a renewed sense of comradeship.

Grace CommunityWorks

Finding the time to volunteer can be difficult. Our solution is Grace CommunityWorks. Through the program, employees are permitted to take time off each year with pay to volunteer at approved agencies. The organizations range from youth mentoring to environmental conservation to senior support, among many others. Our hope is that our collective efforts will make a significant impact in our communities.

Sometimes we see a need and realize that we cannot solve the problem on our own. In one instance, employees in Argentina wanted to start a soup kitchen to help underprivileged children located near the company's plant in Quilmes. The process began in 2003 and garnered community support and donated supplies. Initially 50 children were being fed each day but there was still a need to do more. The Grace team decided to pursue government funding that was ultimately secured after two years of meetings and lobbying. Today the kitchen is thriving and feeds more than 100 children a day.

Grace Foundation

In addition to our time, we make financial contributions through the Grace Foundation, the company's philanthropic arm that supports a wide range of causes. In 2005, the Foundation made donations totaling \$1.3 million to more than 170 organizations, universities and colleges.

Our most significant donations in terms of their size last year were made to the American Red Cross and the United Way. The Red Cross received two donations of \$100,000 for relief efforts in Asia and the United States following destructive storms. With the United Way, Grace matched employee donations that totaled more than \$400,000.

In addition to the Foundation activities, the company donated \$250,000 to St. John's Lutheran Hospital in Libby, Montana. This donation was the seventh presented to the hospital to help the community of Libby. Grace has contributed more than \$1.65 million to the hospital over the years.



Rita Relief Foundation

We quickly discovered our own colleagues in need following Hurricane Rita. The storm damaged or destroyed the homes of employees that live in the Gulf Coast of the United States.

In response, Grace established the Foundation for the Assistance of Grace Employees Affected By Hurricane Rita (nicknamed the Rita Relief Foundation) and made the first donation of \$100,000. The company also matched contributions. In a show of solidarity that

extends beyond national borders, employees in all offices in Germany donated cash and overtime payments. In total, we raised more than \$375,000 from employees, directors, retirees, suppliers, customers and partners from around the globe.



I am very grateful that W. R. Grace and Co. invests in professional development for teachers, builds partnerships with the educational community and is interested in education for our future.

Middle School Teacher Hinsdale, NH

Scholarships

We understand the importance of a good education and provide scholarships to students that are currently attending more than two dozen colleges and universities in North America. The scholarship program has benefited more than 155 children of employees since its inception.

In 2005, Grace introduced an additional program to assist low-income students majoring in chemistry at the East China University of Science and Technology. All had good school performance but may have had to suspend studying if they did not receive economic support.

We also understand the importance of supporting teachers and have sponsored middle level educators to attend The Keystone Center's Key Issues Institute for nearly a decade. The Key Issues Institute is a national training workshop that provides teachers with the skills and confidence to investigate environmental issues in a non-biased manner with their students. Teachers use the experiences to develop and implement new classroom plans in their schools that focus on a local environmental issue.

Grace has been involved with a number of organizations in an effort to have an impact in the community.

American Cancer Society American Lung Association American Red Cross Baltimore City Fire Fighters Boston Lyric Opera Boston Symphony Orchestra Boy Scouts of America Boys & Girls Clubs Columbia Festival of the Arts Deaf Camps, Inc. DeCordova Museum East End House Howard County General Hospital Howard County Public School System Juvenile Diabetes Foundation March of Dimes Maryland Science Center Meals on Wheels National Aquarium in Baltimore National Multiple Sclerosis Foundation **Nature Conservancy Project Bread United Way** Voices For Children YMCA of Central Maryland

Grace Davison

We create chemistry to make your life easier and safer.

Overview

- Grace operating segment that produces catalysts that improve the yield and performance of petroleum and chemical products; silica and molecular sieve-based materials that deliver enhanced performance in digital media, coating, industrial and consumer products and processes; and chromatography products for life sciences, pharmaceutical and biotechnology markets
- 2005 sales of \$1,370.2 million



We work with biotechnology and pharmaceutical customers to help them with drug discovery and development. Grace is a leading innovator, manufacturer and marketer of chromatography columns and instrumentation, as well as silica gel, a material used in many chromatographic processes. Chromatography is a technique used to separate mixtures of molecules into their individual constituents, frequently used in drug applications.

Based on specific customer feedback for maximum sensitivity, ease of use and small footprint, we developed a new chromatography detector in our discovery sciences product group. Here, we review qualifications of the new Alltech® 3300 ELSD, an evaporative light scattering detection product.

2005 Highlights

Revenue up 14.9%, due to strong demand for:

- fluid catalytic cracking (FCC) catalysts that are used in the production of clean fuels that contain fewer pollutants, a better environmental choice
- hydroprocessing catalysts used by petroleum refiners that enable more gasoline to be produced in each barrel
- specialty catalysts for the production of plastic resins used in consumer and industrial applications, which are benefitting from the continuing shift from wood, metal and paper to plastics
- silicas and adsorbents, as growing economies in emerging regions drive the need for infrastructure as well as increased spending on consumer goods
- discovery sciences products used in drug discovery development and production, fueled by continued investment in the life sciences and pharmaceutical industries

Acquisitions & Alliances

- Advanced Refining Technologies (ART) /
 Hydroprocessing: An alliance with Kuwait Catalyst
 Company expands the use of resid catalyst in the
 Middle East, a high growth region for new oil refining
- Specialty Catalysts: acquired Single-Site Catalysts LLC, a supplier of organometallic catalysts, which enhances our technology portfolio by building our capabilities in polyethylene and makes Grace the only integrated polyolefin catalyst supplier
- Discovery Sciences: acquired Flexit Laboratories Pvt.
 Ltd., a chromatography products company in India, which
 gives us a foundation in this high-growth region for
 biotech and pharmaceuticals; Continued with integration
 of Alltech International Holdings, Inc., a global developer
 of high-performance chromatography products

2006 Growth Initiatives

Global Opportunities

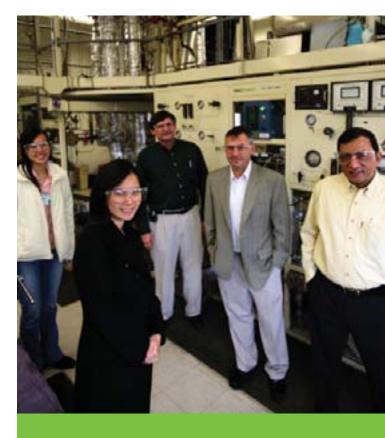
- Continue external growth with expansion into emerging regions (Eastern Europe/Russia; India/China; Latin America) by leveraging existing customer relationships, global infrastructure, and cost-effective manufacturing; and investing in selling resources globally
- Increase investment in technology and R&D, shifting focus to customer-driven projects; investing in fundamental catalysis research to maintain technology leadership; and improving margins through process improvements and efficiencies
- Increase capital investment by continuing to upgrade our manufacturing facilities for better productivity, profitability, and utilization; and adding incremental expansions to meet global supply demands, particularly in hydroprocessing

Business Opportunities

- Refining Technologies: enhance our global position by developing FCC catalyst and additives technology to enhance refiner performance and profitability of heavy crude oils; focusing on technology to meet environmental regulations; and improving manufacturing efficiencies
- ART / Hydroprocessing Catalysts: leverage our refining catalyst position to include hydroprocessing catalysts and technologies as environmental regulations continue to drive demand
- Specialty Catalysts: leverage our strong technological leadership position in traditional polymer resin applications and move into higher-value, high-performance polyethylene segments; expand our automotive emission control business into fast-growth emerging economies of China, India, and Eastern Europe
 - SALES BY REGION (in millions)



- Engineered Materials: reinforce our position as the premier silica and zeolite supplier with technical differentiation of products/services in high value and growing segments; expansion into emerging economies; and increased investment in manufacturing to improve profitability and productivity
- Discovery Sciences: realize the high-growth opportunities in this segment by integrating our material science, geographic infrastructure, including India footprint; and successful customer service model



As the need for higher performance fluid cracking catalysts and hydroprocessing catalysts grows in the Asia Pacific region, we are strengthening our leadership position in the refining industry by expanding our technical sales force. The additions will allow us to spend more time with our customers, focusing on improving their operations and profitability with our catalysts.

Grace Performance Chemicals

We create chemistry to protect your home and your food.

Overview

- Grace operating segment that produces specialty chemicals and materials that strengthen and protect buildings and infrastructure, as well as sealants, closures and coatings for food and beverage packaging
- · 2005 sales of \$1,199.3 million

2005 Highlights

Revenue growth of 12.3% from successful programs leveraging good market fundamentals

- Expanded presence of residential construction products at North American home centers and lumberyards
- Increased demand worldwide for unique products such as STRUX[®] fibers, Preprufe[®] waterproofing and Hydrotint[®] liquid pigments for concrete
- Moved quickly to meet cement industry needs with the development of Synchro® chromium-reducing technology

- Drove growth of new and existing products via emerging opportunities in self-consolidating concrete and high performing walls
- Achieved strong growth in Daraform® PVC-free closure sealants, fueled by continued adoption of oxygen scavenging technology
- Grew specialty packaging coatings through expanded offerings in emerging geographies
- Acquired Perstorp Peramin AB (Sweden) concrete admixture business and Midland Dexter de Venezuela SA packaging coatings and sealants business

2006 Growth Initiatives

Global Opportunities

 Accelerate growth in Europe and Asia, particularly in Eastern Europe, Middle East, India and China, where a stronger presence will allow better focus on customer needs and priorities





- Increase investment in innovation to maintain and grow strong technology position
- Align resources around key accounts and invest in marketing to enable customer-focused opportunities

Business Opportunities

- Residential Building Materials: expand capacity to support accelerating growth with opening of new waterproofing technologies plant in Tennessee; continue to develop distribution channels for high-performance residential products including Grace Ice & Water Shield® and Grace Tri-Flex 30® underlayments and Grace Vycor® flashing
- Construction Products: continue to exploit broad range of technologies and industry expertise to introduce new products and systems for emerging growth segments such as high performing walls, architectural concrete and self-consolidating concrete
- Packaging Technologies: build on technology leadership position to support growing demand for taste and packaging quality assurance in metal and rigid plastic packaging; leverage food safety competencies to address expanding global needs

SALES BY REGION (in millions)





Customers in Asia will benefit from stronger Grace regional resources with the opening of two offices in Shanghai and Beijing in 2005.

The office in Shanghai serves as the headquarters for Grace's operations in China. Many regional business leaders have relocated to China and are now based in the same office. This integration provides for greater productivity.

The facility in Beijing is a technical service center that houses chemical and physical testing laboratories for cement and cement additives, as well as physical testing facilities for concrete and concrete admixtures. Raw materials from within China are used to customize additive formulations to meet varying customer requirements. This center works closely with Grace's technical center in Singapore, and allows for greater on-site collaboration with customers.





LEADERSHIP TEAM

Richard C. Brown Vice President and President, Grace Performance Chemicals

William M. Corcoran

Vice President, Public and Regulatory Affair.

Fred E. Festa

President and Chief Executive Officer

J. P. "Butch" Forehand Vice President, Operations

W. Brian McGowan Senior Vice President, Administration

Michael N. Piergrossi Vice President, Human Resources

Gregory E. Poling
Vice President and President, Grace Davison

Mark A. Shelnitz Vice President, General Counsel and Secretary

Robert M. Tarola Senior Vice President and Chief Financial Officer



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H. Furlong Baldwin ¹

Retired Chairman of the Board, President and CEO, Mercantile Bankshares Corporation

Ronald C. Cambre 1

Retired Chairman of the Board and CEO, Newmont Mining Corporation

Fred E. Festa

President and Chief Executive Officer, W. R. Grace & Co.

Marye Anne Fox ¹

Chancellor,

University of California, San Diego

John J. Murphy 1

Retired Chairman of the Board, Dresser Industries Inc.

Paul J. Norris

Chairman (Non-Executive) of the Board, W. R. Grace & Co.

Thomas A. Vanderslice ¹

Retired Chairman and Chief Executive Officer, M/A-COM, Inc.

INVESTOR INFORMATION

Corporate Headquarters

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Transfer Agent

Inquiries and changes to shareholder accounts should be directed to our transfer agent:

Mellon Investor Services LLC 480 Washington Boulevard Jersey City, NJ 07310-1900 (800) 648-8392 www.melloninvestor.com

Investor Relations

Inquiries from individual shareholders and requests for quarterly reports on Form 10-Q or current reports on Forms 8-K should be directed to:

W. R. Grace & Co. Investor Relations 7500 Grace Drive Columbia, MD 21044 (410) 531-4167 investor.relations@grace.com

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¹ Also serves on Audit, Nominating and Governance, Compensation, and Corporate Responsibility Committees