

Industrial materials

The top three positions within the industrial materials industry remain fixed. The strongest movements within and into the top 10 reflect increases in influence as well as activity in this broad industry.

Many Industrial Materials industry companies support both consumer and industrial markets backed by their common technical competencies. For example, recent Pactiv patents support their move into consumer oriented zipping plastic bags which complement their Hefty brand. This focus is

also reflected in Pactiv's jump into the top 10 from 23 due to the combination of high quality metrics and growth in patenting activity. At the conglomerate end of the industry, Corning, 3M, and Hitachi continued to maintain strength positions through both industrial and consumer product portfolios. Likewise, Compagnie de Saint-Gobain and Guardian Industries both focus on building products for both consumer and industrial uses. The remaining leader board companies deliver materials primarily to industrial markets.

From a quantity perspective, most of companies in this industry grew the number

of patents granted by 10 to 30%. The growth exceptions within the leader board were Pactiv at 89% and Hitachi with a 44% increase. On the low end Albany International was flat while Saint-Gobain grew their granted patents by only 1%. All of the companies that moved up on the rankings did so by improving their Industry impact or quality measure rather than quantity. Albany International led the way with an improvement of 60% in influence which offset their flat patent growth. 3M and Pactiv followed with 22% and 23% industry impact improvement respectively.

On the Scientific Strength front, overall leaders in this industry saw a reduction in research intensity. This is indicative of a stronger interest in pure applications rather than breakthrough science. The only exceptions are Pactiv and 3M. Both are developing strong new capabilities for their industrial and consumer markets that require strong basic research activities.

Figure 1. Industry Impact™



Figure 2. Patents Issued

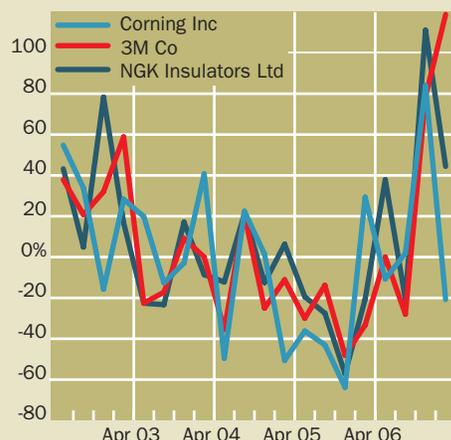


Figure 1. The last 12 months broke the almost 2 year pattern of patenting decline for the leaders in this industry. All three leaders are growing the number of patents granted with 3M more than doubling their patents granted last quarter when compared to the same quarter in 2006.

Figure 2. Both Corning and 3M maintain an Industry Impact above 1.5, which indicates that the others in the industry are building on their patents 50% more than the average Industrial Material patent. Conversely the industry is building on NGK Insulator patents at about the same rate as others. Overall, this indicates that 3M and Corning are patenting in areas attractive to others in the industry and doing so with quality work.

Ranking & Movement		Technology Strength™	Company / Concern	Patent Count	Science Strength™	Industry Impact™	Research Intensity™
May 2007	May 2006	May 2007	Includes subsidiaries and majority-owned companies unless noted	May 2007	0 600 1200	1 2 3 4 5	0 1 2 3
1	1	176.5	Corning Inc	184			
2	2	111.6	3M Co	90			
3	3	86.9	NGK Insulators Ltd	136			
4	8	60	Hitachi Ltd	101			
5	4	57.2	Compagnie de Saint-Gobain	87			
6	9	48.1	Guardian Industries Corp	31			
7	23	42.5	Pactiv	17			
8	7	38	Fujikura Ltd	57			
9	17	35.6	Albany Intl Corp	22			
10	11	34.9	Rehrig Pacific Co	23			

Compiled with data through May 1, 2007

Legend: ■ 1 Year Average ■ 5 Year Average

Industry Impact & Research Intensity industry average is 1.

MMM

Known for their innovation, 3M maintains a broad set of competencies and resultant patents in multiple industries. Similar to most multi-industry companies, 3M maintains strong portfolios in each of its industries.

3M is a model company for innovating new products based on core technical capabilities. Currently the company boasts 40 technical platforms ranging from Adhesives and Abrasives through Light Management, Nanotechnology and Surface Modification. The technologies are assembled into products delivered through 35 business units grouped into Consumer and Office, Display and Graphics, Electro and Communications, Health Care, Industrial and Transportation, and Safety, Security and Protection Services. As such 3M is included in Industrial Materials, Industrial Components & Fixtures, Chemicals, Medical Devices, Electronics & Instruments, and Consumer Products industry scorecards.

Patents that could apply to multiple industries are included in each industry rating. However, when 3M is rated as a company, each patent is only counted once.

This is key to making the patent metrics comparable company to company. Depending on the year Industrial Material patents account for 14 – 20% of the total 3M patents granted and 16 – 22% of the Published Applications.

Within the Industrial Materials industry, 3M maintains a strong portfolio. Ranking number 2, behind Corning, due to a strong industry index or influence (80% better than average) combined with the fourth largest number of patents granted (90). Within this industry 3M maintains the highest Research Intensity at 2.84. Only Corning has been as strong in Research Intensity but in the last year their index has fallen to 2.48. The high Research Intensity suggests that the patenting activity is well balanced between core research and product innovation. The balance provides a basis for both current and future product innovation.

On the horizon

Overall, 3M's portfolio reflects their stellar reputation as an innovator. The only thing that will prevent 3M from maintaining a top leadership position in Industrial Materials would be a change in focus on other competencies. Overall 3M's influential portfolio accentuates that quality patenting

practices coupled with strong patenting is reflected as a true leadership.

Scorecard rankings

Industrial Materials Scorecard	2
Patent Board 500 position	65

Figure 1. Patents are broadly dispersed with 28% Chemicals, 18% Industrial Materials, 11% Medical Devices, and 11% Electronics and Instruments. Cumulatively, these four industries account for 68% of the total patent portfolio.

Figure 2. 3M's Industrial Materials patenting activity follows its overall patent portfolio activity. Overall, there was a slight increase 2002 to 2004 followed by a dip in 2005 and recovery in 2006. Applications declined in both 2005 and 2006 suggesting reduced patenting activity.

Figure 1. 3M Portfolio Distribution

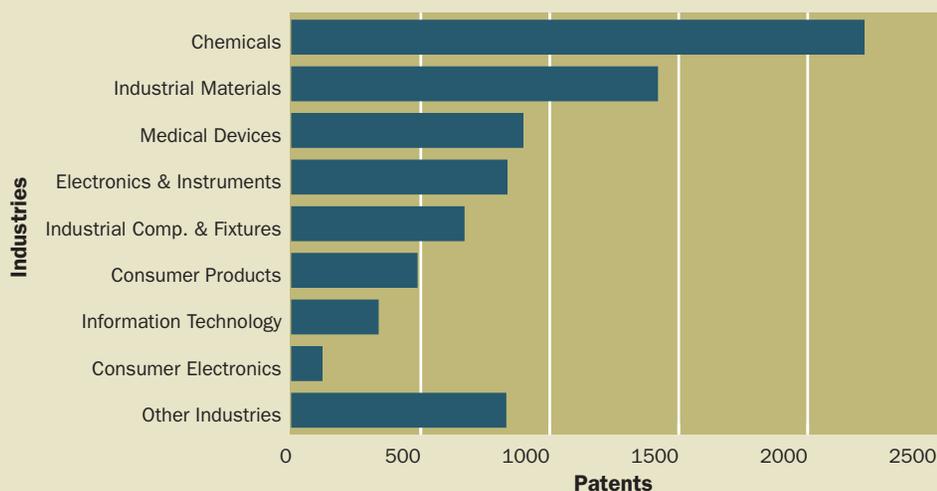
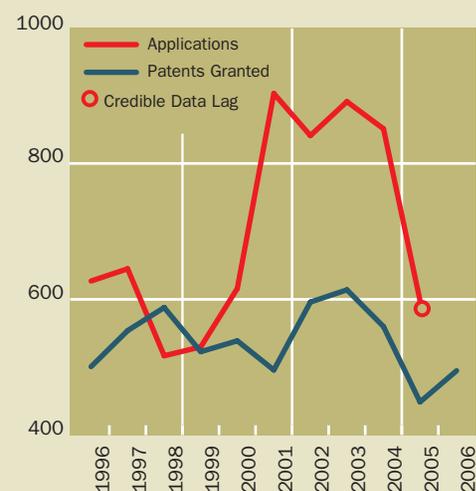


Figure 2. Historical US Patenting Activity



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