

DSM Desotech

Optical Fiber & Cable News

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Introducing:

DeSolite® DP-1004

Unlimited. **DSM**



DeSolite® next-generation

Introducing: DeSolite® DP-1004 Optical Fiber Primary

DSM Desotech is pleased to introduce the first in its new line of next-generation optical fiber coatings, DeSolite DP-1004. Formulated for optimal performance and increased processing robustness, the new primary coating is designed to offer fiber producers new material advantages for today's competitive marketplace.

The introduction of DeSolite DP-1004 comes after more than a year of research and development in response to the changing needs of fiber producers. "In short, our goal was to create a next-generation coating that would improve upon the positive attributes of our existing coatings, while allowing customers to process it more easily under a wider range of conditions," says DeSolite Marketing Manager Kevin Weeks. "Additionally, cost consideration had to be key in the formulation process, so as to allow fiber producers to maintain their competitive advantage."

Increased Processing Robustness

In today's changing industry environment, fiber is increasingly produced under a variety of manufacturing conditions, often without the benefit of a dedicated technical team on staff to

assist with material processing. DeSolite DP-1004 has been especially formulated with this in mind.

"What we see is the desire for highly customized, processing-specific coatings giving way to the need for more "off-the-shelf" materials that can be utilized with less technical expertise," says DeSolite Coatings R&D Manager Dr. Anthony Toussaint. "DP-1004 is a lower-viscosity, easy to use material that addresses the need for processing robustness very well."

DeSolite DP-1004 has a lower volatile content which can contribute to better cure at the end of a long run by causing less fogging of the quartz tubes. In addition, DP-1004 has demonstrated better, more consistent geometry between the primary and secondary layer. This is very useful not only in reducing scrap, but also in lessening the need for intensive post-draw quality control.

Coating Stability..

Like all DeSolite® coatings, DP-1004 maintains excellent stability throughout shipping and over time. Because DeSolite coatings do not crystallize, no special shipping conditions are typically necessary.

Optimal Performance

In formulating DeSolite DP-1004 for improved processibility, a key objective for the coatings development team was to ensure that critical performance attributes were not sacrificed in the process. "It's easy to formulate any material for better performance in one select area if you're willing to compromise another," says Toussaint. "We weren't willing to do that."

Instead, the development team focused on the critical parameters of coating performance throughout the formulation process and, in the end, were able to heighten performance levels of DP-1004 in three key areas:

- **Modulus.** The relationship between coating modulus and fiber attenuation continues to drive the industry toward lower-modulus materials. DP-1004 has been formulated with a lower modulus than previous DeSolite singlemode coatings.
- **N-Value.** Although the GRE standard states a minimum allowable fiber fatigue value of 18, fiber manu-

ation coatings

facturers frequently expect better performance than this. DeSolite DP-1004 test results indicate an n-value, or dynamic fatigue, that is consistently above 20.

- **Cure Speed.** While the industry isn't screaming for increased cure speeds at the moment, this property wasn't overlooked in designing a coating with the future in mind. The processing speed of DeSolite DP-1004 is equal to, or faster than, previous DeSolite coatings and continues to outperform competitive samples both in the lab and on tower.

Positive Test Results

DeSolite DP-1004, which has undergone extensive beta testing, has shown consistently positive results. "Overall, this coating's performance is excellent across the board," says Kevin Weeks.

"Draw results have confirmed good fiber geometry, easy processing, and good water soak performance in both loose tube and ribbon applications. In addition, attenuation results have been positive and the coating shows good strip force characteristics. We are very pleased and expect that our customers will be able to adopt DP-1004 quickly and easily."

DeSolite DP-1004 is now commercially available in all regions. To learn more about the coating, and to obtain pricing information, please contact your DSM Desotech account representative today.

While 2003 marked a glimmer of hope for the stabilization and possible growth of the telecom market, we still have a long way to go. Reports from fiber optic research consultant KMI showed a decline in the optical fiber market from \$5.3 billion in 2001 to \$1.6 billion in 2002 and to \$1.3 billion in 2003. The estimated 60 million km of cabled fiber and 66 million km of fiber produced last year still exceeded demand, causing the price of fiber and cable to continue to drop dramatically. What's worse, roughly 50% of available capacity was used to produce 2003 fiber and cable requirements.

Despite the difficult conditions across the industry, different regions around the world varied greatly in their success or failure in 2003. Here's a recap of the highlights....

Americas

The telecom business in the Americas was a roller coaster ride in 2003: some months quite good, others just plain bad. Toward the end of the year, things started to stabilize. Several positive developments in this region created a glimmer of hope for the industry:

- In the U.S., telecom legislation changed to allow the unbundling of the rate structure for fiber deployment and a more level playing field among service providers installing new networks. The ruling means more control at the state level for fiber deployment, which increases service providers' (especially RBOC's) chances for getting legislative relief.
- With RBOC's unwilling to meet network demand in the U.S., midsize cities (50,000 to 200,000) feeling left out of the fiber deployment plan have elected to pursue building networks themselves. "Incumbent carriers

have given them very long lead times and minimal content availability," says Desotech Regional Sales Director Jim Reese.

- Within greenfield residential developments, developers are finding that installing a network themselves during the building phase offers not only lower costs but also gives their individual homes added value and better acceptance by the buyer.
- The drop-off in value of the U.S. dollar against other currencies has opened up the export market for U.S. suppliers while making it more difficult for imports into the U.S.—especially from Japan and Europe.

Europe

In 2003, Europe remained behind the rest of the world in seeing any kind of market recovery. Projections for a third quarter strengthening never materialized, though inventories did decrease from the end of 2002. Other challenges for this region:

- Europe, which accounted for 22% of global fiber demand in 2000, dropped to only 8% in 2003.
- The incumbent carriers that had started broadband rollouts in 2002 are now slowly increasing their invest-

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See You at WIRE 2004!

The biannual WIRE exhibition will be held again this year in Dusseldorf, Germany from March 29th through April 2nd. As always, DSM Desotech invites you to visit our booth (#12A75) to learn more about our complete line of UV-curable fiber optic materials, including our two newest product introductions:

Bufferlite™ 3000 Series UV-curable tight buffer materials.

Officially introduced in November 2003, Bufferlite 3000 series materials are flame-retardant, halogen-free and lead-free, and available in 12 distinct colors. They complete Desotech's 3-series Bufferlite product line, which also includes Bufferlite 1000 clear inner buffers and Bufferlite 2000 clear outer buffers. All Bufferlite materials process at line speeds of more than 600 m/min. Stop by to learn more about how to produce tight-buffered fiber in-house by converting your existing inking line.



Visit DSM Desotech
at stand #12A75

DeSolite DP-1004. Desotech's newest optical fiber primary coating (see pg. 2-3) is now commercially available in all regions. Stop by to find out more.

DSM Desotech is committed to the success of today's optical fiber and cable producers. We look forward to seeing you at WIRE 2004!

Optical Fiber & Cable News

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DSM Desotech Optical Fiber & Cable News is published as an information resource for the optical fiber industry. Reader inquiries and suggestions for content are welcomed and should be directed to the editor at:

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Year-in-Review

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ment in order to develop more intelligent networks and facilitate higher levels of voice and data combination. Several carriers are looking at a switch to Ethernet products for metro applications. However, operations are using more DSL in broadband rollouts and this will be a hard trend to change.

- As in the U.S., service providers are being pressured to provide high-speed access to small cities. Yet right now, very few providers are breaking even and it is unsure how long this can continue.
- The strong Euro, in combination with countries seeking greater export opportunities like South Korea and the United States, intensifies an

already crowded and complex playing field. It is clear that consolidation must occur before growth will happen.

Asia/Pacific

If there was a shining star in telecom in 2003, it was China—the only country that experienced significant growth from the year before. Though margins slumped due to excess capacity and aggressive efforts to capture market share, China continued to be a magnet for investment in telecom manufacturing. Other highlights in Asia:

- The big news was the commencement of anti-dumping legislation on South Korean, Japanese and American fiber. However, even with this legislation, prices continued to fall and most raw material suppliers, equipment vendors, fiber producers and cabling suffered from negative cash flow in 2003.

- South Korea entered the year with the highest concentration of broad band access in the world. As a result, S. Korean producers continue to rely mainly on export sales.

- India's large population represents a tremendous opportunity for the fiber and cable industry, but continues to lack a concerted government effort or sufficient demand to drive rapid growth.

- The year ended with more questions than answers. What penalties will anti-dumping legislation cause to be put in place? Will the planned increases in fiber production capacity be realized? How long will telecom investment continue at the current levels? How will consolidations change the playing field? Only 2004's Year-in-Review may tell.