Solvay Booth #2414 | MD&M West 2020

Solvay and PDI Healthcare collaborate on disinfectant resistance testing of specialty polymers

Anaheim, Calif., Feb. 11, 2020 --- Solvay announced the results from PDI Healthcare’s compatibility study of Solvay’s polymers with healthcare disinfectants. In collaboration with Solvay, PDI Healthcare – a leader in infection prevention products and solutions – conducted performance and cosmetic tests on multiple Solvay high-performance specialty polymers. Several PDI disinfectants, including Sani-24®, Sani-HyPerCide™, Sani-Prime®, and Super Sani-Cloth®, were used to test Solvay’s Specialty Polymers. These materials are employed extensively in medical devices and equipment that are exposed to the repeated application of aggressive disinfectants used to help prevent the risk of hospital acquired infections (HAI). Detailed test results can be found on PDI Healthcare’s website.

At the time of this announcement, 93 percent of the Solvay polymers showed a high retention of tensile strength and 100 percent of Solvay polymers showed high retention of impact properties, which are key indicators of their resistance to environmental stress cracking (ESC), potentially resulting from chemical exposure. The cosmetic testing revealed no apparent surface damage or degradation to any of the Solvay materials tested.

“It is a delicate balance to provide disinfectants strong enough to eliminate harmful bacteria, yet gentle enough to preserve the integrity of the medical devices being disinfected,” said Sean Gallimore, senior vice president and general manager, PDI Healthcare. “Our collaboration with Solvay is a proactive step toward ensuring compatibility of disinfectants with polymers during the medical device development process, ultimately helping medical facilities reduce overall cost of ownership and the risk of HAIs.”

PDI Healthcare’s performance testing was conducted on Solvay’s Amodel® polyphthalamide (PPA), Radel® polyphenylsulfone (PPSU), Veradel® polyethersulfone (PESU), and Udel® polysulfone (PSU), with plans to test Ixef® polyarylamide (PARA) and Kalix® high-performance polyamide (HPPA) in the near future. The cosmetic testing was done on all six Solvay polymers. During each test, the Solvay materials were exposed to widely used PDI Healthcare disinfectants, ranging across different types of antimicrobial actives. Testing for tensile strength and notched Izod impact properties was conducted per ASTM D543: Standard Test Method for Evaluating the Resistance of Plastics to Chemical Reagents and ASTM D638: Standard Test Method for Tensile Properties of Plastics. For cosmetic testing, sample materials that had been wiped with the disinfectants twelve times a day for two weeks were evaluated for changes to the surface by three PDI reviewers not involved with the testing.

“Solvay is committed to helping customers keep pace with healthcare industry trends by providing a wide range of support, including supplying technical data on our materials to engineers and designers,” said Jeff Hrivnak, global business manager for Healthcare at Solvay Specialty Polymers global business unit. “The data from third-party testing, such as the testing completed on our materials by PDI Healthcare, can help accelerate the design process, optimize device service life, and control costs by enabling more informed decisions about material selection.”

Solvay and PDI Healthcare are discussing these results here at MD&M West 2020 in booth #2414 and #368, respectively. Parts made with Solvay’s Ixef® PARA, Radel® PPSU and Kalix® HPPA that were repeatedly subjected to Sani-24®, Sani-HyPerCide™, Sani-Prime®, and Super Sani-Cloth® are also on display.

* Amodel, Ixef, Kalix, Radel, Veradel and Udel are registered trademarks of Solvay.
Solvay is an advanced materials and specialty chemicals company, committed to developing chemistry that addresses key societal challenges. Solvay innovates and partners with customers worldwide in many diverse end markets. Its products are used in planes, cars, batteries, smart and medical devices, as well as in mineral and oil and gas extraction, enhancing efficiency and sustainability. Its lightweighting materials promote cleaner mobility, its formulations optimize the use of resources and its performance chemicals improve air and water quality. Solvay is headquartered in Brussels with around 24,500 employees in 61 countries. Net sales were €10.3 billion in 2018, with 90% from activities where Solvay ranks among the world’s top 3 leaders, resulting in an EBITDA margin of 22%. Solvay SA (SOLB.BE) is listed on Euronext Brussels and Paris Bloomberg: SOLB.BB - Reuters: SOLB.BR), and in the United States its shares (SOLVY) are traded through a level-1 ADR program. Financial figures take into account the planned divestment of Polyamides.


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PDI disinfectants, including Sani-24®, Sani-HyPerCide™, Sani-Prime®, Super Sani-Cloth® were used to test Solvay’s Specialty Polymers. These high-performance plastics are employed extensively in medical device and equipment applications that are exposed to the repeated use of aggressive disinfectants used to help prevent the risk of hospital acquired infections (HAI). Photo courtesy of PDI Healthcare.