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Technyl® accelerates lightweighting evolution for China automotive OEMs and Tiers

Comprehensive offering includes performance and cost benefits of Technyl® material selection, advanced application simulation, functional prototyping and part testing services

Shanghai, PR China, April 24, 2018 – Solvay Performance Polyamides is promoting its Technyl® polyamide (PA) portfolio and unique advanced services and support for automotive OEMs and Tier customers in China to make the switch to metal replacement applications. This will guarantee China customers robust, cost-efficient and timely solutions with which other global automakers in Europe and the Americas are already familiar.

“The global automotive industry is in a major process of disruption led by a significant transfer of investment from fossil fuel combustion engines to plug-in hybrid and fully electric drive concepts,” says Hill Gu, Asia Auto Market Head for Solvay Performance Polyamides. *“With China at the forefront of e-mobility, we are actively ramping up our service and support targeting light-weighting. Optimizing vehicle weight is necessary for automotive OEMs to meet increasingly strict regulations on fuel efficiency and emissions, also essential for new energy vehicles (NEVs) to extend their range and autonomy.”*

The Technyl® array of advanced services for Chinese OEMs and Tier 1’s to quickly shift from metals to plastics includes:

- **Material Database:** Technyl® material database is considered the most comprehensive in the industry, speeding proper material selection and design optimization. Continuously updated with new high-strength products
- **MMI Technyl® Design:** Multi-scale modeling, Mechanical calculation and Injection molding simulation (MMI) help engineers understand the real behavior of materials. It enables them to gain the right level of confidence in component performance before moving forward with prototyping and physical production. The Digimat powered CAE service, which already included advanced predictive simulation tools and failure analysis models, now allows customers run fatigue analysis simulation testing of parts.
- **Sinterline® Technyl®:** The range of Sinterline® PA6 powders for rapid prototyping also includes glass-filled grades, and together with efficient 3D printing technology delivers parts that enable manufacturers to evaluate and test their designs without the need for costly tooling. Thanks to Sinterline® powders they can use additive manufacturing for mini-series and spare parts production.
- **APT® Technyl® Validation:** At Technyl®’s Application Part Testing (APT®) centers, OEMs and Tiers are supported with a wide scope of test benches and validation equipment developed in close collaboration with customers to meet the most demanding industry standards. The extensive capabilities at the Shanghai APT® center, opened in late 2016, complement the light-weighting materials and service offering. Dedicated capacities are constantly being expanded, such as for pulsated air burst pressure and vibration testing, electro-dynamic shaker and stone impact, oil circulation and oil separation test benches.

Many steel, aluminium and even magnesium automotive components have already been successfully replaced by light, strong, durable and cost-effective high-performance polyamides which facilitate design freedom allowing for complex function integration and ease of processing. The oil filter module is one key application example that demonstrates how Technyl® PA66 can effectively replace metal, resulting in major weight savings (around 35%) and total cost reductions (approximately 30-40%) and greater functionality as well as reliability through part integration.

Another major benefit of replacing metals with plastics is lower vibration and noise generation, as the sound dampening characteristics of polymers help with the acoustic performance of the car, extremely important for smaller engines and quieter xEVs.

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¹ MMI Technyl® Design is an advanced service powered by Digimat from e-Xstream, an MSC Software Company

Solvay is an advanced materials and specialty chemicals company, committed to developing chemistry that address 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 light-weighting 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 €10.1 billion in 2017, 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](https://www.solb.be)) is listed on Euronext Brussels and Paris (Bloomberg: [SOLB.BB](https://www.solb.bb) - Reuters: [SOLB.BR](https://www.solb.br)) and in the United States its shares (SOLVY) are traded through a level-1 ADR program.

Learn more about Technyl® brand at [WWW.TECHNYL.COM](http://www.technyl.com) and follow us on [TWITTER](https://twitter.com/technyl) / [Facebook](https://facebook.com/technyl) / [Youtube](https://youtube.com/technyl) / [Instagram](https://instagram.com/technyl)

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Replacing metal in an oil filter module demonstrates how Technyl® PA66 can effectively result in major weight savings (around 35%) for the OEM and total cost reductions (approximately 30-40%) for Tier 1 equipment suppliers who can provide parts with greater functional integration such as crankcase ventilation, soot particle separation and by-pass valves for example. Photos courtesy of Solvay Performance Polyamides.



Solvay Performance Polyamides' APT® Lab in Shanghai, China.
Photo: Solvay Performance Polyamides.

