

## Solvay announces winners of Additive Manufacturing (AM) Cup 2019

**Bollate, ITALY, May 2, 2019** --- University students around the world compete to 3D print shapes using Radel® PPSU AM-ready filament.

Solvay reveals the winners of its [AM CUP 2019](#) for university students to fabricate specific shapes using Radel® PPSU AM filament. Winners were selected from 35 student teams from 32 universities across three continents.

Each team received a spool of Radel® polyphenylsulfone (PPSU) AM filament with the main challenge to replicate an ASTM D638 Type V size tensile bar in the z-axis and a wavy-shaped pressure pipe, a difficult shape to injection mold. Key criteria to be met in the main challenge were maximum dimensional accuracy, mechanical performance, including burst pressure tests, and translucency. In addition, the jury evaluated the creativity of the 3D printing methods.

The overall winner, rewarded for a thorough optimization of all aspects of the printing process and equipment, was the Gekko Performance team from the Technical University of Munich, Germany. The team secured the first prize due to its ability to achieve 100 percent z-axis strength in the Type V size tensile bar and its wavy pipe showed overall dimensional accuracy, surface uniformity, and a remarkable mechanical performance by enduring a burst pressure test of 1,400 psi (96.5 bar) for two hours.

Two teams from Ghent University, Belgium - PPSUusual and PPSUPER - were awarded second and third place respectively. Very little separated the teams as both achieved the next best performance in tensile modulus, tensile strength, and ductility.

*“It was inspiring to see the various approaches to solving the challenges of fused filament fabrication (FFF) such as bed adhesion and chamber temperature management. The winning team demonstrated once more that 3D printed parts can virtually match the performance and quality of conventional injection molded parts, provided material, hardware, and process are optimised together,”* said Ryan Hammonds, R&D platform manager for Solvay’s Specialty Polymers global business unit and president of the AM Cup Jury. *“We look forward to sharing with our customers the benefits gained from this edition of the Solvay AM Cup for 3D printing the best possible PPSU parts for applications in various industries such as aerospace, healthcare and industrial.”*

The winning teams selected by an international jury received ten, five and three thousand euros respectively, to be reinvested in academic, societal or entrepreneurial activities.

The [Solvay AM Cup](#) challenge was initiated to demonstrate the potential of high-performance 3D printing materials in the hands of talented design and engineering students with a passion for exploring ‘the art of the possible’ for this disruptive, revolutionary technology.

Solvay has taken a lead in the rapidly evolving AM market and offers a growing range of filaments for applications in different printing and fusion processes. Besides Radel® PPSU, the current portfolio also comprises neat and carbon filled KetaSpire® polyetheretherketone (PEEK) AM filaments, including medical-grade formulations for limited-contact healthcare applications. Moreover, these advanced filaments have recently been added to the Digimat® simulation software database of e-Xstream engineering, allowing customers to predict and optimize their parts in order ‘to print right the first time.’.

Solvay will exhibit the winning entries of its AM Cup 2019 at the Rapid + TCT show in Detroit, MI (Booth #747) from May 21-23. [For more information visit our website.](#)

® KetaSpire and Radel are registered trademarks of Solvay.

® Digimat is a registered trademark of e-Xstream engineering, an MSC Software company of Hexagon.

 [FOLLOW US ON TWITTER @SOLVAYGROUP](#)

**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 27,000 employees in 62 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.*

**Solvay Specialty Polymers** manufactures over 1500 products across 35 brands of high-performance polymers – fluoropolymers, fluoroelastomers, fluorinated fluids, semi-aromatic polyamides, sulfone polymers, ultra-high performance aromatic polymers, and high-barrier polymers – for use in Aerospace, Alternative Energy, Automotive, Healthcare, Membranes, Oil and Gas, Packaging, Plumbing, Semiconductors, Wire & Cable, and other industries. Learn more at [www.solvayspecialtypolymers.com](http://www.solvayspecialtypolymers.com).

#### Media Relations

**Enrico Zanini**

Solvay Specialty Polymers  
+39 02 2909 2127  
[enrico.zanini@solvay.com](mailto:enrico.zanini@solvay.com)

**Alan Flower**

Industrial Media Relations  
+32 474 117 091  
[alan.flower@indmr.com](mailto:alan.flower@indmr.com)

**Marla Witbrod**

Solvay Specialty Polymers  
+1 770 772 8451  
[marla.witbrod@solvay.com](mailto:marla.witbrod@solvay.com)

**Joe Bennett**

AH&M Marketing Communications  
+1 413 448 2260 Ext. 470  
[jbennett@ahmnc.com](mailto:jbennett@ahmnc.com)



Solvay reveals winners of its Additive Manufacturing (AM) Cup 2019 for university students around the world to fabricate specific shapes using Radel® polyphenylsulfone (PPSU) AM filament. Graphic & Photo: Solvay