Colombes – November 2, 2020

Arkema takes part in FORMNEXT Connect 2020, the virtual exhibition for additive manufacturing

Arkema will participate in Formnext Connect, the 2020 virtual alternative of the exhibition, to present its latest innovations in specialty materials for all major 3D printing technologies and to exchange with the global AM community. Through digital seminars, Arkema continues to maintain a close relationship with its customers and partners to support the fast growing 3D printing market and to develop the new manufacturing technologies in these times of a global pandemic.

With the largest portfolio of specialty materials and innovative solutions for the additive manufacturing, Arkema continues to grow its offering through its platform, *3D Printing Solutions by Arkema*, and to partner with strategic innovative companies along the additive manufacturing ecosystem. With these innovations and partnerships, Arkema is investing in new capacities to address the fast growing worldwide additive manufacturing market and to accelerate the development of the disruptive manufacturing technologies.

"Thanks to our experts knowledge of end markets, our lab capabilities, our network of complementary partners and our broad line of solutions, we can advise decision-makers and help them choose the material and printing technology best suited to their needs," said Sumeet Jain, Arkema's Senior Director for 3D Printing worldwide. "Our goal is to position ourselves very early on at the heart of the technological options that are going to emerge."

Stay connected with our experts and partners at Formnext Connect, and take part in our webinars:

"High Performance Polymers for Powder bed fusion and Filament extrusion – Performance and sustainability for end use applications" – Tuesday 10th November – 6.30 pm (Paris CET)
Summary: Arkema, a manufacturer of high performance polymers, will share the latest in materials and end use applications in aerospace, automotive, consumer goods, and industrial markets with emphasis on durability and sustainability; two key drivers enabling the expansion of 3D printing to revolutionize supply chains.

" Liquid resins for radiation curing – A broader N3XTDIMENSION® offering to meet new applications and performance demands" – Thursday 12th November – 12.00pm (Paris CET)
Summary: Arkema's acquisition of Lambson Ltd brings a full range of selected photoinitiators and cationic resins to the N3xtDimension® custom liquid resin systems' materials family for additive manufacturing. Our experts will present this new offering, share new engineered solutions and highlight state of the art industrial use-cases, to show how our comprehensive range of capabilities and deep technical expertise are enabling the development of tailored solutions to our customers and partners.

Arkema
420, rue d'Estienne d'Orves – F-92705 Colombes Cedex – France
Tel.: +33 1 49 00 80 80 – Fax: +33 1 49 00 83 96
A French *société anonyme* (limited company) with share capital of €767,364,760 – Registered in Nanterre: RCS 445 074 685
arkema.com

3D Printing Solutions by Arkema, a market leading product portfolio including:

Advanced Liquid Resins and Photoinitiators for radiation curing
The range of products commercialized under the brand **N3xtDimension®** enables market-leading performance possibilities with overall excellent properties such as high resolution, wavelength independency, processability and regulatory compliance. The range offers customized solutions and enables freedom of design, essential to push additive manufacturing to the next level.

NEW:

- With the recent acquisition of Lambson Ltd, **N3xDimension® resin solutions** enhances its offering with selected photoinitators and unique cationic resins into its custom liquid resin systems solutions.
- New developments expand our range of engineered resins: **water soluble resin** designed for 3D printing applications requiring rapid dissolution, **new high-impact strength** resin enabling the manufacturing of performance functional parts and **new hybrid resin** delivering engineering level performance across multiple platforms and adjustable to different wavelengths.

Thermoplastic powders for powder bed fusion

- **Orgasol® Polyamide 12:** With the unique particle shape and narrow particle size distribution, Orgasol® Invent Smooth powders are the perfect material for the prototyping of small, complex parts, yielding an incomparably smooth surface. Meanwhile, the outstanding viscosity stability and excellent recyclability are otherimportant benefits of Orgasol® Invent Smooth powders: thanks to the unique, patented polymerization process, the powders show very low refresh rate.
- **Rilsan® Polyamide 11**: As a high performance 100% biosourced polyamide, Rilsan® Polyamide 11 has been specifically developed for 3D printing, and is available under two grades: Rilsan® Invent Natural and Rilsan® Invent Black. Rilsan® Polyamide 11 is now the material of choice to design and manufacture final production parts by additive manufacturing with its unparalleled mechanical strength and durability, used in parts manufacturing process in the fields of cars, trucks, planes and medical devices.
- **Rilsan® Polyamide 11 (Reinforced)**: Rilsan® Polyamide 11 (Reinforced) has opened up the scope of possibility in terms of application and properties, these materials exhibit unique properties, such as increased stiffness for higher temperature applications and superior dimensional stability but also specific features like conductivity or electrostatic dissipative properties.
- **Pebax® TPE**: the partially biobased thermoplastic elastomer developed for selective laser sintering (SLS) provides the ideal combination of the usual strength of polyamides plus the flexibility and elasticity of polyethers/polyesters.

Thermoplastic pellets for filament extrusion

- **Kepstan® PEKK**: As high performance thermoplastic, Kepstan® PEKK offers an outstanding combination of mechanical strength, chemical resistance, low flammability, and high use temperature. Filaments made from Kepstan® PEKK resins can be used to produce functional parts in the most demanding applications, such as amorphous or semicrystalline parts in the FFF process.
- **Altuglas® 3D PMMA Resin**: Acrylic resin is highly desirable for its optical clarity, surface finish, and outdoor weatherability. The Altuglas® 3D acrylic resin is specially formulated to make more intricate parts and prototypes that are both transparent and functional with the recommended printing parameters.
- **Kynar® PVDF**: Polyvinylidene fluoride resins are the most durable polymers in the world, they are extremely resistant to harsh chemicals and UV radiation. This tough semi-crystalline fluoropolymer, formulated for printability, benefits from outstanding Z direction strength and ductility. Kynar® fluoropolymers are specified for printing chemical processing equipment, fluid transport parts, outdoor exposed elements, or jigs & fixtures.
- **Pebax® TPE**: This unique polymer offers toughness and elasticity, filaments made from Pebax® resin are particularly well suited for functional prototypes or short run manufacturing. Pebax® elastomers are world renowned in sports, industrial, and footwear applications.

Arkema, a key player in the 3D printing value chain

Arkema
420, rue d'Estienne d'Orves – F-92705 Colombes Cedex – France
Tel.: +33 1 49 00 80 80 – Fax: +33 1 49 00 83 96
A French *société anonyme* (limited company) with share capital of €767,364,760 – Registered in Nanterre: RCS 445 074 685
arkema.com

Beyond offering an industry leading portfolio of materials, Arkema is committed to unlocking new opportunities by bringing comprehensive solutions and expertise along the additive manufacturing ecosystem and continue enhancing and expanding its strategic partnerships with particularly:

- **Continuous Composites**: Arkema, through its Sartomer Business, partnered with Continuous Composites from its inception with the joint ambition to accelerate the adoption of additive manufacturing to new industries. Through our partnership, the innovative company is applying Sartomer's photocurable resins, materials expertise, laboratories capability and application experience to complement the CF3D® technology. Continuous Composites is progressing their facilities and technology capabilities through expansion and significantly increased build volumes. Arkema is honored to be associated to this milestone and to play a role in bringing CF3D to commercialization.
- **9TLabs**: the company has developed a technology that automates the manufacture of composites using additive manufacturing (AM) and advanced software algorithms. This technology will enable the mass production of composite parts using our Kepstan® PEKK. Arkema and 9T Labs will jointly develop the market, focusing on high-volume mass-production applications and material certification in order to accelerate large-scale adoption of the technology.
- **Adaptive3D**: Adaptive3D photo-resins are based on **N3xDimension®** advanced UV-curable liquid resins and are printable for high-throughput manufacturing of functional complex 3-dimensional plastic and rubber parts in a wide range of applications. With this investment in Adaptive3D, Arkema takes a new milestone that will create exciting opportunities for new applications in footwear, medical, automotive and electronic appliances, among others.

Additive manufacturing optimizes design, driving a reduction in the raw materials used and in the losses incurred during the prototyping and manufacturing phases. By developing solutions that can be used to reduce the weight of land and air vehicles and thereby lower fuel consumption, Arkema contributes to the United Nations' SDG 13: "Take urgent action to combat climate change and its impacts."

*Building on its unique set of expertise in materials science, **Arkema** offers a portfolio of first-class technologies to address ever-growing demand for new and sustainable materials. With the ambition to become in 2024 a pure player in Specialty Materials, the Group is structured into 3 complementary, resilient and highly innovative segments dedicated to Specialty Materials -Adhesive solutions, Advanced Materials, and Coating Solutions- accounting for some 80% of Group sales, and a well-positioned and competitive Intermediates segment. Arkema offers cutting-edge technological solutions to meet the challenges of, among other things, new energies, access to water, recycling, urbanization and mobility, and fosters a permanent dialogue with all its stakeholders. The Group reported sales of €8.7 billion in 2019, and operates in some 55 countries with 20,500 employees worldwide. www.arkema.com*

MEDIA CONTACTS

Gilles Galinier	+33 1 49 00 70 07	gilles.galinier@arkema.com
Véronique Obrecht	+33 1 49 00 88 41	veronique.obrecht@arkema.com

Arkema
420, rue d'Estienne d'Orves – F-92705 Colombes Cedex – France
Tel.: +33 1 49 00 80 80 – Fax: +33 1 49 00 83 96
A French *société anonyme* (limited company) with share capital of €767,364,760 – Registered in Nanterre: RCS 445 074 685
arkema.com