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MANUFACTURING TECHNOLOGY INSIGHTS

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APAC SPECIAL

3D PRINTING EDITION



UV 3D PRINTING TECHNOLOGY EXPERTS

Charlie Anderson,
3D Director & Founder

MONOCURE 3D

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MANUFACTURING TECHNOLOGY INSIGHTS TOP 10
3D PRINTING
SOLUTION PROVIDERS IN APAC - 2019

MONOCURE 3D

UV 3D PRINTING TECHNOLOGY EXPERTS

By Laura Davis

Monocure Pty Ltd was established in 1979 by an industrial chemical veteran, Alan Anderson. The traditional business of the company involved the production of inks based on a unique UV curable water-based resin system for the label and packaging industry in Australia and abroad. Charlie Anderson joined his father's business five years ago after spending over two decades in the television industry. A customer of the company asked him if Monocure could produce a UV curable resin suitable for desktop DLP and SLA 3D printers. This very moment set the stage for the company's next phase of evolution. Monocure 3D was born. Charlie worked with Monocure's Research and Development team to create Australia's first UV curable 3D printer resin. As the word spread and desktop 3D resin printers became more mainstream, Monocure 3D started to ramp up. "Getting into UV 3D printing resin was a natural progression for us, and we are very excited about the future," remarks Charlie, 3D Director and Founder, Monocure 3D.

With over three decades of UV formulation experience, Monocure is today at the forefront of UV 3D printing technology in the world. The company's team of expert chemists having a vast combined experience in UV technology have developed the advanced 3D resin systems in house. The resin systems display unique characteristics, such as smoothness, hard surface strength, and an easy to print formula. Monocure's 3D resin was developed for Digital Light Processing (DLP) 3D printers. These produce incredibly detailed parts with an excellent



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surface finish. DLP systems convert liquid UV materials (photosensitive polymers) and composites into solid cross-sections, layer by layer, to build highly accurate three-dimensional parts of different geometries at the same time.

Monocure develops innovative products from the highest quality materials to help make the process of resin printing easier. The company's Chief Development Chemist, Kevin Jarret, has been with Monocure since its inception, and his innovative mind has contributed to the development of many of the company's products, including their 3D resin system.

Among Monocure's products, Rapid Resin possesses a unique formula using a tough resin base developed in house leveraging expensive equipment and years of experience. Also known as the "forgiving resin," Rapid Resin is very easy to print and can be swiftly dialed in and run by a printer. "Just pour Monocure's resin in and follow our resin calibration settings. You'll start printing in no time with repeatable results, print after print," says Charlie. Moreover, all of the company's Rapid colors have been developed to cure and behave in similar ways. Hence, one setting works with all of them.

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Monocure's Rapid Resin is designed for low powered LED/LCD DLP type 3D printers. For high powered LED projector type 3D printers, the company offers its Standard Resin range. Both types of resin have been successfully tested on a range of SLA and DLP printers. The resins have a non-yellowing formula and require very little post-curing, they have very low odor and volatile organic compound (VOC) emission, they exhibit enhanced toughness and durability, among their many beneficial attributes. Monocure develops and manufactures all their resins on-site, so they never run out of stock and can easily adjust the formulations if a client requires a custom solution.

Another highly functional product is the Monocure 3D RESINAWAY, a highly advanced non-flammable and safe UV resin cleaning solution that quickly and effectively removes any uncured UV photopolymer resin from printed parts without unwanted surface cracks, cloudiness or white residue. It serves as a perfect cleaner for build plates, vats, instruments, and surfaces. RESINAWAY is safer, quicker, more effective, and longer-lasting than Isopropyl Alcohol (IPA).

Further adding to Monocure's practical product line is the Monocure 3D PLATEBOND, a UV cured build plate adhesion promoter designed to help 3D printed resin parts adhere to the build plate. This product can be used in conjunction with Monocure 3D resin or with other photopolymer resin systems. Platebond is designed to work with 3D printing applications. Popular by the name of 'liquid insurance,' Platebond ensures no more failed resin prints.



For all of Monocure's diverse products, the company's production manager, Darren Abbott, ensures the accuracy and speed of production to keep up with the demands from their customers. The company also allows clients to prototype their products through the professional printing of high-quality 3D models at the Monocure 3D Print Lab. Monocure's prints are of high quality, and they offer a multitude of different filaments and resins that clients can choose from, including a vast range of FDM filament that the company has sourced and resells under their own brand from a major international supplier.

Monocure currently sells through a network of over 50 resellers across the globe. "DHL provides a fantastic service delivering our resin around the world in record time," states Charlie and adds, "Our U.S. customers are always impressed when they order their resin on a Monday, and it flies from Australia to them by Wednesday!" Monocure also sets itself apart from its competitors in the 3D printing market with their high-quality products, strict quality control bound by ISO9001 accreditation, services, aftermarket technical support, innovation of new products, attention to the community's needs, and more.

Strikingly, Monocure does not offer customer support via call centers. Instead, the company's own technical team responds to customers' questions and welcomes critique to enhance their work. Moreover, aligning themselves with their tech-savvy clientele, Monocure remains active across social media channels, for instance, with their Monocure 3D User group on Facebook, to connect with their customers. The company's international distribution manager, Joshua Gover, prudently ensures the orders get fulfilled and sent on time, facilitating customer satisfaction.

"We are currently in the final testing stages of a very tough resin, with an extremely high tensile strength that will revolutionize the 3D printing resin industry," says Charlie. With research and innovation, Monocure keeps up to date with the demands of customers and the 3D printing community, to develop cutting edge new products. The company is continuing to grow their international resellers with the aim of having their products available to any country. "We are excited about 3D printing as we see a big future in 3D printing on request. As this technology becomes easier, more accessible, and less expensive, more and more people will own 3D printers. In the meantime, we are happy to help them," concludes Charlie.

MANUFACTURING TECHNOLOGY INSIGHTS TOP10

3D PRINTING

SOLUTION PROVIDERS IN APAC - 2019

developments happening across hardware and software, 3D printing technologies or additive manufacturing, are revolutionizing various industries and has become an imperative part of the manufacturing process. Major players in the manufacturing industry have demonstrated a growing interest in 3D printing as an industrial solution.

On the other hand, industries like aerospace are leveraging the process of 3D printing using additive manufacturing as a resourceful technology that solves the challenges associated with repairing and servicing components of a space shuttle in the outer space. Due to the increasing innovation in 3D printing, solutions and service providers are now focusing on building better, faster, larger and more capable machines while extending the range of materials that are offered.

TOP 10 3D PRINTING SOLUTION PROVIDERS IN APAC - 2019

Company	Description
3D Bots *3dbots.sg*	3D Bots was established to bring to market a wide range 3D Printers from reputable brands in the Additive Manufacturing space. The company offers a selection of filament and SLA based 3D printing machines and materials to customers in South-East Asia
Aurora Labs *auroralabs3d.com*	Aurora Labs Ltd is an industrial technology and innovation company that specialises in the development of 3D printers, powders, digital parts and their associated intellectual property
Carima *carima.com*	Carima manufactures 3D printers using the DLP technology and export high-end printers all around the world. Carima owns utility model rights, several certificates and more than 9 Korean patents and makes every effort to provide advance 3D printers to help companies increase their business and production efficiency
LuxCreo *luxcreo.com*	Founded in 2016, LuxCreo is dedicated to large-scare 3D-printing manufacturing, covering software, hardware and materials
Monocure 3D *monocure3d.com.au*	Develops and provides high-quality UV curable resin suitable for desktop DLP and SLA 3D printers with a team of expert chemists
NYOMO *nyomo.com*	Nyomo is a technology driven company that specializes in 3D printing solutions. Nyomo is the only company providing full end to end solution with software and more than 8 professional 3D printers models and post curing tools
RCS2 TECHNOLOGIES *rcstotech.com*	RCS2 Technologies provides the latest 3D printing technology and several other transformational technologies with an assurance of performance, consistency, safety and value
SHINING 3D *shining3d.com*	Provides integrated solutions for 3D digitizing technology that includes high precision 3D digitizing (3D scanning), 3D modeling and inspection (reverse design, 3D inspection) and more
Stratasys *stratasys.com*	Delivers cutting-edge industry-specific applications that accelerate business processes, optimize value chains and drive business performance improvements for future-ready leaders
XYZprinting *xyzprinting.com*	Brings best-in-class and cost-effective 3D printing to consumers and businesses around the world, backed by proven industry expertise, and an innovative spirit