

Solvay's Udel® P-1700 PSU enables MTTS Company to innovate an integrated, cost-efficient Bubble CPAP machine to aid breathing of low birthweight infants

Shanghai, China, May 31, 2017 – Solvay, a leading global supplier of specialty polymers, announced today that its biocompatible Udel® P-1700 polysulfone (PSU) helped Hanoi, Vietnam-based MTTS Company Ltd. to innovate its new Dolphin Bubble CPAP machine, which combines the latest in respiratory care with exceptional value. CPAP therapy – for continuous positive airway pressure – maintains open airways for pre-term and low-birth weight newborns who breathe spontaneously but often inadequately. Offering a sterilizable alternative to disposable polymer parts, Solvay's Udel® PSU forms two injection-molded components of MTTS's machine: the humidifier housing and the system's positive end-expiratory pressure (PEEP) chamber.

"MTTS was established in 2004 with the goal of delivering innovative, cost-effective solutions for newborns in need of intensive medical care," said Gregory Dajer, director of MTTS. "In designing our Dolphin CPAP system, we aimed to innovate a complete, non-invasive solution that was also more cost-efficient due to its integrated design and replacement of consumable components with reusable parts. Solvay played an instrumental role in our success. In addition to helping us select Udel® PSU polymer for key components, Solvay's team supported us with molding expertise and relevant testing for healthcare applications."

Bubble CPAP machines maintain pressure in the breathing circuit by immersing the distal end of the expiratory tubing in water. As the gas flows through the system, it "bubbles" out and prevents buildup of excess pressure. With funding help from The Wellcome Trust, a biomedical research charity based in London, MTTS built its Dolphin machine for comfort, reliability and ease of use. Its integrated design encompasses gas mixing, humidification, PEEP chamber, air compressor and pulse-oximeter in one compact unit. The PEEP chamber primarily improves oxygenation by increasing functional residual capacity and helps to improve lung compliance and decrease the work of breathing. MTTS received the CE mark in Europe for its system last year.

Udel® P-1700 PSU is a medical-grade, biocompatible polymer that maintains high-strength and toughness after repeated exposure to up to 100 autoclave sterilization cycles. The material is highly resistant to harsh chemical disinfectants commonly used in the healthcare industry, such as sodium hypochlorite bleach and 2.4 percent glutaraldehyde solution. It offers higher heat resistance and better hydrolytic stability than polycarbonate and exhibits low creep under sustained loads at elevated temperatures.

"MTTS's integrated Dolphin CPAP system fulfills an important mission with an innovative simple solution and Solvay was gratified to play a role in its success," said Jeff Hrivnak, global healthcare business manager for Solvay's Specialty Polymers business unit. "One of several biocompatible resins available from our broad portfolio, Udel® PSU offers a unique combination of performance and value designed to help innovators like MTTS solve their design challenges and deliver ground-breaking new solutions."

Solvay's experience as a reliable materials supplier in the healthcare field spans more than 25 years. The company is a leading manufacturer of healthcare plastics, offering a broad range of high-performance, medical-grade plastics for orthopedics, sterilization cases and trays, medical and dental devices, as well as filtration media and housings for hemodialysis and water purification membranes. Solvay also offers a family of Solviva® Biomaterials for use in a range of implantable devices.

® Udel is a registered trademark of Solvay



[FOLLOW US ON TWITTER @SOLVAYGROUP](#)

About MTTs Company, Ltd.

MTTs was established in 2004 with the goal of delivering innovative, cost-effective solutions for newborns in need of intensive medical care. We offer a comprehensive suite of technologies for neonatal care -from CPAP machines that treat respiratory distress syndrome to phototherapy machines that treat neonatal jaundice. These state-of-the-art devices help healthcare professionals to deliver a better quality of healthcare to a growing number of patients, and at a lower cost. Learn more at <http://www.mtt-asia.com>.

About The Wellcome Trust

The Wellcome Trust exists to improve health for everyone by helping great ideas to thrive. It is a global charitable foundation that is both politically and financially independent. The Wellcome Trust supports scientists and researchers to help them take on big problems, fuel imaginations and spark debate. Learn more at <https://wellcome.ac.uk>.

About Solvay Specialty Polymers

Solvay Specialty Polymers manufactures over 1500 products across 35 brands of high-performance polymers – fluoropolymers, fluoroelastomers, fluorinated fluids, semi-aromatic polyamides, sulfone polymers, aromatic ultra-high performance polymers, high-barrier polymers and cross-linked high-performance compounds – 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.

About Solvay

Solvay is a multi-specialty chemical company, committed to developing chemistry that addresses key societal challenges. Solvay innovates and partners with customers in diverse global end markets. Its products and solutions are used in planes, cars, smart and medical devices, batteries, in mineral and oil extraction, among many other applications promoting sustainability. Its light weighting materials enhance 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 58 countries. Net sales were € 10.9 billion in 2016, with 90% from activities where Solvay ranks among the world's top 3 leaders. 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.

Press Contacts

Umberto Bianchi

Solvay Specialty Polymers
+39 02 2909 2127

umberto.bianchi@solvay.com

Jacky Chang

CommNow
+86 21 3368 7028

jacky.cheng@commnow.cn

Marla Witbrod

Solvay Specialty Polymers
+1 770 772 8451

marla.witbrod@solvay.com

Erin Shi

Solvay Specialty Polymers
+86 (21) 2350 1326

erin.shi@solvay.com



Solvay's sterilizable Udel® P-1700 PSU helped Hanoi, Vietnam-based MTTTS Company Ltd. to innovate its new Dolphin Bubble CPAP machine, which combines the latest in respiratory care with exceptional value. CPAP therapy – for continuous positive airway pressure – maintains open airways for pre-term and low-birth weight newborns who breathe spontaneously but often inadequately. Offering a sterilizable alternative to disposable polymer parts, Solvay's Udel® P-1700 PSU forms the two semi-transparent components, shown here on the right side of MTTTS's machine. From left: the humidifier housing and the system's positive end-expiratory pressure (PEEP) chamber. Photo courtesy of MTTTS Company Ltd.