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For Immediate Release

Sodick Plustech to Mold Nypro Syringes Made of TOPAS® COC at NPE 2012

SCHAUMBURG, Ill., January 30, 2012 – Sodick Plustech, Schaumburg, Ill., a leading manufacturer of high-precision injection molding machinery, will showcase its V-Line two-stage plunger system at NPE 2012: The International Plastics Showcase, April 1-5, 2012, at the Orlando County Convention Center in Orlando, Fla. At the booth, the company (Booth #363), will use the unique system to mold a medical syringe made of TOPAS® cyclic olefin copolymer (COC) from TOPAS Advanced Polymers, Florence, Ky., in a mold developed by Nypro Inc. (Booth #4263), Clinton, Mass.

The prototype application demonstrates the use of COC as a viable replacement for glass in syringe applications. TOPAS cyclic olefin copolymer is crystal clear with outstanding moisture barrier and dimensional consistency. For pharmaceuticals, TOPAS COC permits long-term drug storage and design flexibility, plus avoids the delamination problems associated with glass.

Unlike other engineering thermoplastics or glass, TOPAS polymer offers a non-ionic, minimally reactive surface. This non-polar substrate does not promote adsorption, denaturation, aggregation, or precipitation. With lower leachables and extractables, TOPAS resin preserves long-term drug purity ensuring better quality at high yields and potentially lower part cost.

A TOPAS COC staked needle syringe, produced in a Nypro mold, offers excellent barrier properties, without the release of ions or heavy metals and with lower particle levels especially in protein-based drugs compared to glass. TOPAS resin has very low fluorescence and can be aseptically



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filled or terminally sterilized in break-resistant, lightweight configurations. The material complies with international quality standards including USP, EP, and JP.

Sodick Plustech's injection system utilizes a two-stage "V-LINE" method for plasticizing and injection. This proven technology delivers consistent shot volumes and melt densities matched with standard designs. Unlike a conventional in-line reciprocating screw system, the V-LINE plasticizing screw remains stationary during material transfer, minimizing axial wear and ensuring each pellet sees the same heat profile. The two-stage plunger injection unit provides an optimum screw size and plunger size combination (e.g., 40-mm screw with 32-mm plunger injection) for an ideal recovery time and shot size.

The "V-LINE" injection unit is controlled by a closed-loop system comparing actual speed to set speed and maximum melt pressure. User selectable limits can be easily input on the process monitor screen. Once the exact amount of material is transferred into the injection chamber, the injection plunger that is retracted via the melt is maintained to a set position. This design eliminates the need for a check valve, a primary source of material degradation and shot volume inconsistency. Prior to injection, the plasticizing screw is indexed forward creating a positive shut-off (exact dosing). This action prevents any opportunity for backflow of molten material back into the melt stream.

Nypro offers a configurable portfolio of barrier solutions across its three market segments. The Nypro/TOPAS/Sodick collaboration demonstrates the convergence of precision tool making, advanced material science, and advanced manufacturing systems to deliver market-leading plastic-based alternatives for glass applications requiring tight dimensional tolerance, resistance to breakage, scale, and manufacturing efficiency. Throughout Nypro's history, technology development has been at its core with innovation driving business growth in three global markets: Healthcare, Consumer, and Electronics and Packaging. Nypro's commitment to innovation has led to the development of plastic solutions



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aimed at competing with glass. Nypro is particularly well suited to deliver a plastic-based solution because of its polymer science expertise, vertically integrated business model, prototyping and precision tooling capabilities, global manufacturing footprint, and advanced technology centers focused on customer-led development.

About Sodick Plustech

Sodick Plustech, with headquarters in Tsuzuki-ku, Yokohama, Kanagawa, Japan, is a global supplier of high-precision injection molding machines. The company developed its own design of V-LINE Two-Stage Plunger Style injection molding machines in 1988 through its experience with Sodick (www.sodick.jp), the largest EDM manufacturer, and its relationships with tool makers. Sodick Plustech's entire line-up of high-precision injection molding machines are designed and built in Kaga, Japan. The company offers horizontal injection molding machines (thermoplastic, LSR) from 5 ton-650 ton and vertical injection molding machines (thermoplastic, LSR) from 20 ton-150 ton. More information is available at www.plustech-inc.com.

About TOPAS Advanced Polymers

TOPAS Advanced Polymers manufactures and markets TOPAS cyclic olefin copolymers (COC) for advanced packaging, healthcare, optical, and other applications worldwide. It also supplies the chemical intermediate norbornene. The company is a joint venture of Daicel Corporation and Polyplastics, both of Japan. Headquartered in Frankfurt, Germany, it has a U.S. subsidiary in Florence, Ky., and operates the world's largest COC plant in Oberhausen, Germany. For more information, visit www.topas.com.

About Nypro Inc.

Nypro is the leading global solutions provider in the field of manufactured precision plastic products. The company operates 41 locations in 14 countries, employing over 17,000 people. Sales for the most recent fiscal year were approximately \$1.2 billion. As a vertically integrated leader in plastics manufacturing, Nypro offers virtually all aspects of the plastics production processes required by the world's leading companies, including product design and development, mold making and design, precision injection molding, advanced decoration, assembly, contract manufacturing for full-finished and shipped goods, supply chain management, and diversity supply. Served markets include Healthcare, Consumer & Electronics, and Packaging, along with additional markets through its strategic companies. More information is available at www.nypro.com.

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