

ADHESIVES

A COMPREHENSIVE RANGE OF ADHESIVES FOR ELECTRONIC, AUTOMOTIVE AND GENERAL MANUFACTURING INDUSTRIES.

CONSUMABLES

ASSEMBLY MATERIALS AND MACHINE CONSUMABLES USED IN SEMICONDUCTOR, PHOTONIC AND HYBRID ASSEMBLY ETC.

EQUIPMENT

ASSEMBLY, TEST AND INSPECTION EQUIPMENT FOR THE MICROELECTRONIC, ELECTRONIC, PHOTONIC AND SEMICONDUCTOR INDUSTRIES.



Inseto

ADVANCED TECHNOLOGY FOR RESEARCH & INDUSTRY

CONNECT NEWSLETTER

Welcome to the twenty-third issue of our company newsletter, "Inseto Connect", dedicated to providing information on new products, supplier & company news and technical announcements.

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Inseto Acquires Wafer Specialist IDB Technologies Ltd

Inseto is delighted to announce its acquisition of IDB Technologies, a specialist supplier of semiconductor wafers and substrates. The two companies have worked closely together for several years and share many of the same customers, who now stand to benefit greatly from the combined resources and technical expertise.

IDB Technologies' materials stock and service offerings have added to Inseto's Consumables Division. In addition, Ian Burnett, founder of IDB Technologies, who has joined Inseto to provide support to customers, comments: "This is a win-win for all parties concerned, and especially our customers. Inseto is ISO 9001:2015 certified, has invested in an impressive storage and handling facility and has automated many of its processes to assure as fast a turnaround as possible on all orders".

We can now supply a wide range of wafers, with next day delivery, from an extensive UK stock, and many other wafers can be provided on short lead-times. The company also processes wafers including oxidised and nitride coating, patterned and diced wafers.

Matt Brown, Managing Director of Inseto, comments: "As users' projects become more complex, and as they scale their manufacturing processes to serve their target markets, it is essential to have a streamlined supply chain plus the ability to call on technical expertise when it comes to specifying materials and equipment. Following our acquisition of IDB Technologies and along with Ian coming on board, Inseto can help users commercialise their products by de-risking manufacturing aspects they are perhaps encountering for the first time."

Please see our website for more details: <https://www.inseto.co.uk/microelectronic-materials-semiconductor-wafers.php>

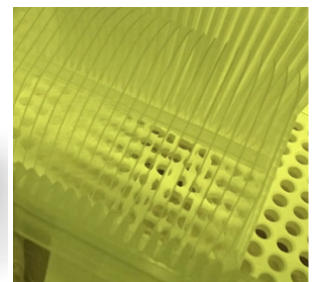
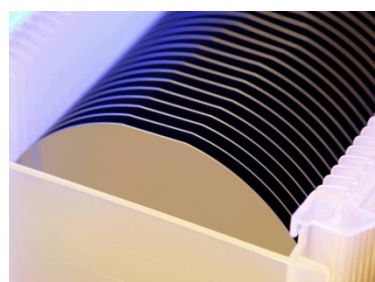
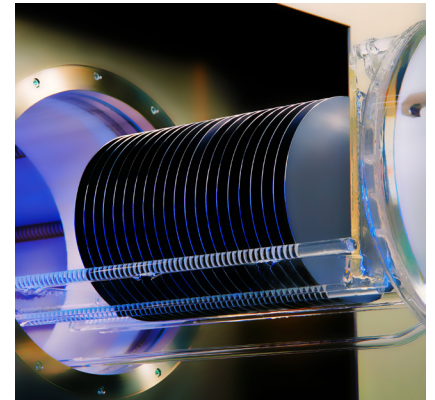
Card Payments

Inseto has recently introduced a new online payment portal to accept customer payments using debit or credit cards.



The new service is accessed via the Inseto website, where customers enter their card details to pay both safely and securely.

In addition, the new facility, which uses the Merchant services of "Stripe", is entirely free of charges or fees to the customer and can be used to pay for any invoiced goods or services.



An Enduring Bond - Inseto and DELO celebrate 20 years of partnership



Inseto and **DELO**, a leading manufacturer of industrial adhesives, are celebrating 20 years of partnership during which meeting customers' needs has, and remains, an unwavering top-priority.

Inseto is DELO's exclusive distributor in the UK and Ireland and has extensive experience of supporting customers in high-tech engineering sectors - including electronics and microelectronics – and harsh environment industries including aerospace, automotive and oil & gas.

Robert Saller (pictured left), Managing Director of DELO, comments: "Since their appointment in 1998, Inseto has always impressed us with their knowledge of adhesives and the way in which they work tirelessly with customers to find fit-for-purpose solutions."

Eamonn Redmond (pictured right), Sales Manager of Inseto, comments: "It's a privilege to be working with DELO, as the company has a very healthy attitude to R&D, and as the industry presents new bonding challenges, the company is quick to respond with not just new chemistries for adhesives but also the processes required to meet customers' needs."

Saller continues: "Inseto has played a crucial role in strengthening our footprint in the UK and Ireland during the last 20 years and we're very much looking forward to continuing the partnership."

IMAPS-UK Die Attach Workshop

Inseto is confirmed as a sponsor for the forthcoming IMAPS-UK Die Attach Workshop at the MTC on 22nd November 2018. Sessions comprise:

- Die Attach Processes
- Equipment, Tooling & Optimisation
- New Process Developments, Materials & Surgery
- Quality, Testing & Reliability



See the IMAPS-UK website for more details and to reserve a place:
www.imaps.org.uk/events/die-attach-workshop

IMAPS-UK Corporate Award

In recognition of the support that Inseto has provided to IMAPS-UK and the wider microelectronics packaging community, we are pleased to announce that Inseto was the proud recipient of IMAPS-UK's Corporate award at the recent IMAPS-UK Annual Conference "MicroTech" for 2018.

SUSS MicroTec agreement expanded to also cover Sweden, Norway & Finland



Under the expanded arrangement, Inseto's Equipment Division will now be responsible for the sales of mask and wafer aligners, spin coaters, wafer bonders and other equipment from **SUSS MicroTec's** product range in Sweden, Norway and Finland, along with its existing territories of the United Kingdom and Ireland.

Virginie Quet, SUSS MicroTec's Director of Sales and Marketing in Europe, the Middle East and Africa, comments: "Inseto has been representing our product lines in the UK and Ireland for a little over a year and we are extremely impressed with their knowledge of the semiconductor industry."

Jim Rhodes, Technical Sales – Nordic, of Inseto, comments. "We know the territories extremely well as we've been representing other OEMs and their product lines in Finland, Norway and Sweden for almost 10 years now, and we have well-established relationships with customers already using, or who could benefit from using, SUSS MicroTec's semiconductor manufacturing equipment."

"At SUSS, we choose our partners very carefully and, in Inseto, we feel there's potential for an enduring partnership that will benefit our highly valued customers in Finland, Norway and Sweden", concludes Quet.

Staff Changes & Additions at Inseto

Inseto would like to welcome Alex Forster who has joined the Technical Support team to increase our capacity in this important department; and Caroline Jarvis, who has recently joined the excellent administration department, to support their ever growing workload. We wish these additions well in their new positions and trust they will further enhance the level of service and support our customers have become accustomed to.

In addition to these new appointments, Inseto is pleased to announce that Matt Brown has taken over the Managing Director's role from Tony Brown, who has been appointed as the company's new Financial Director.

GDPR

We have recently updated our privacy policies and data handling in line with GDPR for both internal and external data processing purposes. Full details of our updated policy can be found on the Inseto website, at <https://www.inseto.co.uk/disclaimer.php> - Should customers wish to contact Inseto directly for data requests or further clarification, please email GDPR@inseto.co.uk.

ADHESIVES | EQUIPMENT | CONSUMABLES

WWW.INSETO.CO.UK

Marketing Updates

Inseto has published a new Company Overview brochure.

The document includes a comprehensive overview of the company and its activities, including our new wafer products and customer support capabilities.

Please download it from our website [HERE](#)



Knowledge Base Updates

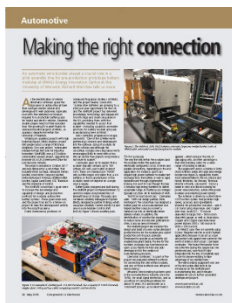
See Inseto's latest Knowledge Base documents recently added to our website:

- Adhesives for PCB Assembly
- Basic Adhesive Types

Downloadable [HERE](#)

Inseto in the Press

Courtesy of CIE (Components in Electronics), "Making the Right Connection" was published in the May edition and features the crucial role a Kulicke & Soffa Asterion Large Wire & Ribbon Bonder played in a pilot assembly line for pre-production of battery modules, that was installed in WMG's Energy Innovation Centre at the University of Warwick.



Donations & Community Support

The Charitable Donations and Community Support activities this year, selected by the employees at Inseto, were "The Sporting Memories Foundation", whose volunteers deliver sporting memory activities to older people in the community, in care homes and in hospitals living with dementia, in order to alleviate loneliness.



Other projects supported included local not-for-profit Community Charity "The Wolverines Cheer Academy", to help equip its new cheerleading facility in Basingstoke and "Wiltshire College", Salisbury, in order to support student project activities that are not otherwise funded.

Comment on Brexit

Despite the uncertainty caused over Brexit, business in the last twelve months is at record levels; a big thank-you to all our customers! As a result, Inseto has continued to grow and invest in our facilities, stock, training and staffing levels.

Since a large percentage of this business is with Companies outside the UK, we are also planning our strategy to ensure continued and uninterrupted supply, in the event of a hard Brexit.

Kulicke & Soffa Supplier Update

Kulicke & Soffa (K&S) has recently introduced a new website, including comprehensive information on its consumable products, such as: Dicing Blades, Capillaries and Large Wire/Ribbon Wedges/Guides etc. Please visit www.kns.com for full details.

Equipment News

New Automated Bond Testers & Materials Test Software

Nordson-DAGE has recently introduced two new fully automated Bond testing platforms dedicated for either wafer bump test, or wire pull and bond shear test and a software suite dedicated for materials test.

The new **4600 Bond Tester** is a benchtop system designed to automatically perform complex test procedures without needing operator input. The system can automatically complete shear and pull test patterns with different orientations of bonds, while recording failure mode images upon completion.

Inseto has now delivered the first of these systems and has a further three ordered by customers.

The new **4800 Bond Tester**, available with or without wafer handling, is at the forefront of wafer testing technology, developed for testing wafers from 200 to 450mm. Intuitive and intelligent Nordson-DAGE Paragon™ software provides the ultimate flexibility for the creation and mapping of wafers, enabling quick and precise setup of test patterns. The virtual images for each test pattern enable easy editing.

The edge lift smart chuck is uniquely designed for handling warped and thin wafers. Edge lift pins keep the wafers from sliding off the chuck, while the gradual vacuum pressure allows optimal vacuum on the wafer. The edge lift smart chuck features a built-in cross hair camera alignment target, pre-alignment accuracy, and integrated calibration. The unique multi-function cartridges increase the versatility of the 4800 bondtester. A variety of multi-function cartridges are also available; users can check with the factory for transducer combinations.

Paragon™ Materials for installation on 4000Plus systems (configuration dependant), is a new suite of software designed for performing mechanical failure analysis on a range of micro-materials. Paragon™ Materials is specifically designed to tackle complex material failure modes and take the operator straight to the root cause of the failure mode. Traditionally, micro-materials testing has been difficult to set-up and even more taxing to extract the correct failure information from the raw data. Paragon™ Materials presents a clear interface to the user featuring built-in analysis tools and statistical algorithms – allowing the user to find every failure with ease.



Handheld Plasma Wand

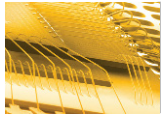
Plasma Etch has recently introduced an easy-to-use, handheld plasma cleaning system that requires no input gas to operate.



With a low starting price, the **Plasma Wand** is the most cost-effective way to experience the benefits of plasma cleaning.

Bond strengths can be improved by simply removing organic material and activating surfaces with the wand. Plasma cleaning works well on materials including glass, plastic, rubber and even metal.

Plasma is the most environmentally friendly way to clean. There are no chemicals involved and no hazardous waste to dispose of. For most applications, the Plasma Wand doesn't need an input gas. Input gases can be used if a specialised nozzle is purchased.



Consumables News

New Thick Film Pastes by Koartan

New developments in the “**Thick Film**” include a low-cost Silver-Platinum paste (6331) that provides low resistivity and excellent leach-resistance; a cross-over dielectric (5816) specifically engineered to be CTE-matched to Aluminium Nitride that can be fired anywhere between 825°C and 875°C; and two brand new pastes for multi-layer ceramic capacitor and chip resistor terminations - a Silver Palladium paste and a gold dipping paste.



These are complemented by Koartan's other pastes specifically developed to work on AlN. These are 4906, a gold conductor; 6122, a silver conductor, 6292, a silver-palladium conductor; 5652, 5660 and 5662, overglaze materials; and 796X and 798X silver-palladium resistor pastes.

As with all Koartan materials, these new additions to the Company's extensive product range are both RoHS and REACH compliant.

New Die Attach Solder Wires

High lead-content solder alloys are the preferred material for low-cost production of power components.

Benefits include resistance to thermal fatigue, high melting temperatures, and the absence of intermetallics that are seen with most other materials. They contain a minimal level of impurities, are void-free, and have almost no surface oxidation, which are the prime requirements for zero-fault die-attach in power electronics.

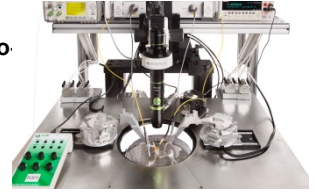


The wires are manufactured in-house by **Coining**, with a proprietary process that limits wire surface oxidation and prevents the inclusion of particles, blisters, drawing-media or other substances.

Available alloys have melting points from 287°C to 309°C.

Optoelectronic Wafer Probers

Inseto has recently delivered a number of manual, semi- and fully-automatic “**Electro-Optical Wafer Probers**” for testing optoelectronic and photonic components at wafer level. Each system was designed to suit the precise needs of the customer.



SemiProbe's unique technologies include double-sided probers, plus an integrating sphere holder that enables users to analyze horizontal and vertical emitting devices on the same system in either manual or semi-automatic configurations.

Further developments also include sub-micron fibre alignment for silicon photonic devices using manual or automated multi-axis positioners (as shown in the above system delivered to VTT in Finland) and laser measurement for auto adjustment of wafer planarity to fibre height.



Adhesives News

New Dam Material

The new electronic adhesive **DELO MONOPOX GE7985**, which has been developed for electronic, automotive and industrial applications requiring miniaturised designs in combination with highest reliability.

Given the increasing miniaturisation in electronics, component real estate is now at a premium, meaning that there is only limited space for adhesive beads. The new GE7985 has smaller fillers than previous dam products, allowing it to be applied with needles of a minimum diameter of 250µm, which is important.



Thanks to a very high viscosity of 160,000mPas, the adhesive also provides high flow resistance and an aspect ratio of 2.5. This means that the height of an adhesive bead can be more than twice its width, without the bead collapsing. In addition DELO MONOPOX GE7985 has low water absorption and a very good resistance to acids, oils and other aggressive media.

See us at the following events in 2018/9:

- Engineering Design Show, 17-18 October, Coventry
- POP2 - Photonics & Opto Packaging, Paignton, 23 October
- Die Attach Workshop, 22 November, Coventry
- innoLAE 2019, 22-23 January, Cambridge
- IMAPS-UK Annual Conference 2019, 4 April, Cambridge

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