



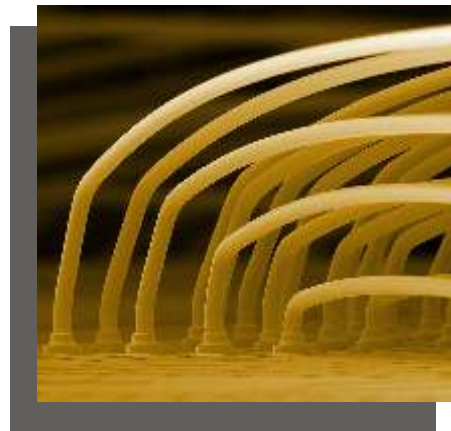
# inseto

TECHNOLOGY FOR RESEARCH & INDUSTRY



Equipment

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Materials & Consumables

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Technical Support

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Adhesives

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PRODUCT PRESENTATION 2012

# Presentation Index

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Welcome to Inseto's Product Presentation Booklet, which provides an overview of the products & services that we provide. Please do not hesitate to contact us should you have any questions, or require more detailed information.

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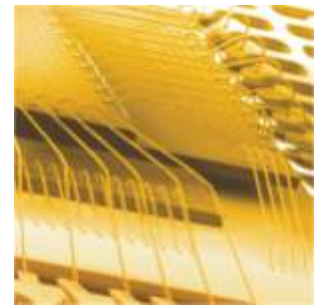
# About Inseto

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An ISO Accredited Company established since 1987, Inseto provides advanced manufacturing equipment plus related material and consumable products for Microelectronic production, including Semiconductor, Photonic, MEMS & Micro-Nanoelectronic etc., as well as products for high technology & industrial manufacturing.



Our range of advanced equipment and materials are available from specialist technology divisions, which offer carefully selected, technically innovative, high performance products. Further details of our Company's product range can also be found on our website [www.inseto.co.uk](http://www.inseto.co.uk)



Customer support activities are at the centre of Inseto's "Total Customer Service" philosophy, where we aim to understand, communicate and fulfil the needs of our customers, better than any competitor.



We are committed to meeting these requirements through the application of high standards of quality and customer care, both before and after sales, by continually investing in training & adopting a policy of continuous improvement in our Company and its people.



**Inseto (UK) Limited - An ISO 9001:2008 Accredited Company**

# Technical Support Services

Inseto's engineering team has developed high levels of knowledge and experience in the implementation of quality support services, including:

- Process Reviews & Improvements
- Machine Repairs
- Emergency Breakdowns
- Certified Maintenance & Calibrations
- Annual Support Contracts
- Equipment & Process Training Classes



We understand that requirements may vary, depending on the size of your facility & in-house capabilities and will tailor our services, matching your requirements precisely. All of our work is carried out in accordance with the manufacturers guidelines using comprehensive service checklists, calibrated instruments, OEM warranted parts and is Certified according to our ISO accreditation & procedures.



Inseto prides itself in the range and experience of its engineers, regularly updating their skills and knowledge, ensuring they use the latest procedures, equipment and best Health & Safety practices.

ISO 9001 Inseto Technical Support Services:

- Professional Accredited Support
- Highly Experienced Engineering Team
- Fully Trained & Factory Qualified
- OEM Approved Service Supplier
- Cost Effective Solutions
- Tailored Services
- ISO Certified Support Services

Please contact us to discuss your specific requirements:  
Email: [support@inseto.co.uk](mailto:support@inseto.co.uk) or Call: +44 (0)1264 334505



# Product Division Overview

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## **Microelectronics Equipment Division**

Inseto's Microelectronics Equipment Division provides manufacturing equipment for the Microelectronic, Photonic, Nanoelectronic, Solar Cell and Semiconductor industries etc., including probing systems, dicing and scribing machines, die and wire bonders, plasma cleaners, ovens & vacuum soldering systems, material testers for pull & shear testing, microscopes, automatic inspection systems for wafers and high power test systems etc.

## **Microelectronics Materials Division**

Inseto's Microelectronics Materials Division provides assembly materials and machine consumable items for the Semiconductor, Microelectronic, Photonic MEMS and Hybrid assembly industries etc. Products include gold, aluminium, copper and silver bonding wires and bonding ribbons, precision metal stampings, solder preforms, hermetic glass & ceramic sealed packages, thick film materials (thick film inks), metalised thin film and precision machined ceramics, thermal dissipation materials, and die / wire bond assembly consumables including wedges, capillaries and collets, dicing blades etc.

## **Adhesives Division**

Inseto's Adhesive Division provides technically advanced adhesives for bonding, sealing & encapsulation throughout the UK & Ireland. Exclusively representing DELO Industrial Adhesives in the UK & Ireland and ACC Silicones in the UK, our adhesive division has the technical expertise to advise on all your project requirements. Our experienced specialists will help with product selection, lab testing, trials, qualifications and application methods.



# Microelectronic Equipment Division

Inseto's Equipment Division provides manufacturing equipment for the Microelectronic, Photonic, Nanoelectronic, Solar Cell and Semiconductor industries including probing systems, dicing and scribing machines, die and wire bonders, plasma cleaners, etchers & ashers, material testers for pull & shear testing, microscopes, automatic inspection systems for wafers and high power test systems.

Full technical support including process, operation and maintenance is provided, with extensively trained field personnel and information databases. Training either at Inseto's training facility or onsite, can be provided to maximise equipment productivity and optimise quality of results.



**ATV**  
**Bench Top Furnaces**

Multi Purpose Fast Ramping Bench Top Furnaces. Space Saving & Energy Efficient, Load At Room Temperature, Programmable 100 Step Profiles To 1250°C, Vacuum With Multiple Process Gases For Up To 300mm Devices



**Camtek**  
**AOI Inspection Systems**

Fully Automatic 2D & 3D Wafer Inspection Systems. Analysis Of Kerf & Surface Defects On Standard Or Bumped Wafers Up To 12"



**SemiProbe**  
**Modular Wafer Probers**

Probe Systems For Life™ Modular Probing Platform With Full Upgrade Capability From Manual To Semi & Fully Automatic Configurations, For Probing Of Micro, Nano & Opto Electronic Devices, MEMS, Microfluidics & More.



**ADT**  
**Peripheral Dicing Equipment**

A Broad Range Of Peripheral Equipment To Complement ADT's Dicing Saws, Including:  
- Wafer Mounting Systems  
- Tape Curing Systems  
- Wafer Cleaning Stations  
- Wafer Frames & Cassettes  
- Wafer Grip Rings etc



**ADT**  
**Dicing & Scribing Systems**

Semi & Fully Automatic Dicing & Scribing Systems For Wafers, Glass, Ceramic, Metals, Packages, MEM's & Other Hard Materials For Up To 12" Wafers



**ATV**  
**Diamond Scribe Systems**

Precision Diamond Scribes For Manual Scribing Of Ceramic/Glass Substrates And Silicon Wafers. Vacuum Chuck, Fine Adjust, Cross Hair Alignment



**Amadyne**  
**Multi Function Bonders**

Automatic Bench Mounted Batch Assembly Systems. Integrated Vision & Software For Automation Of Complete Device Or Sub Assembly Operations. Ideal For: R&D, Low-Medium Volume Assembly Operations.



**Amadyne**  
**Automatic Flexible Bonders**

Fully Automatic Inline Capable Flexible Assembly Systems For Microsystem Assembly Operations Including Pick & Place, Eutectic or Epoxy Die Bonding, Sort Or Flip Chip, Component Test Integration



**ATV**  
**Thermal Processing Equip.**

Benchtop Furnaces, Solder Vacuum Reflow Ovens With Rapid Thermal Annealing & High Temperature Capability For Void-Free Solder Reflow, Die & Substrate Bonding, Package Sealing, Flip Chip / Thermocompression Wafer Bonding & Reflow etc.



**Dr Tresky**  
**Manual Die Bond & Sort**

Flexible Manual Component Assembly Systems With Ergonomic Controls And A Versatile Modular Design For Virtually All Assembly Requirements Including Eutectic & Epoxy Bonding, Flip Chip, Die Sorting etc.



**Plasma Etch Inc.**  
**Plasma Cleaners & Etchers**

Plasma Treatment, Etching, Ashing & Cleaning Equipment, Including Entry Level Benchtop Models, Through Industrial Sized Batch To High Volume Continuous Feed Reel-to-Reel & Inline Production Systems.



**Kulicke & Soffa**  
**Manual Wire Bonders**

Manual To Semi-automatic Models For Gold Ball & Bump Bonding & Wedge Bonding. Convertible Thermosonic Ball & Wedge Bonders.



**Kulicke & Soffa**  
**Auto Ball / Bump Bonders**

High Speed Gold Ball Bond Systems For IC, MCM & Large Area Hybrid Assembly. Operations With Manual To Automatic Handling Systems. Ultra High Speed Ball Stud Bumping Systems For Up To 12" Wafer/Large Area Devices



**Orthodyne**  
**Automatic Wedge Bonders**

Dedicated & Universal Bond Testing Systems For:  
- Wire Bond Pull  
- Die & Bond Shear  
- Tweezer & Stud Pull  
- Bump Pull & Shear etc.



**Dage**  
**Bond Testing Systems**

Dedicated & Universal Bond Testing Systems For:  
- Wire Bond Pull  
- Die & Bond Shear  
- Tweezer & Stud Pull  
- Bump Pull & Shear etc.



**Leica**  
**Inspection Microscopes**

Modular High Performance Stereo & Compound Microscopes / Accessories For Inspection & Assembly Operations



**Allteq**  
**Bond Inspection Systems**

After Bond Inspection Systems For Boat Carried Or Leadframe Devices. Programmable Or Manual Versions. Leadframe Die Coating Systems



**Focused Test**  
**ATE Equipment**

ATE Component Test Manufacturer For Power Discrete & Analog IC ATE With Multi-site Test Capability To MIL Standard 750



**ATV**  
**Hoplates & Chucks**

High Precision Hot Plates & Chucks. Excellent Uniformity, Max Temp 360°C/450°C Higher On Request. Solid, Uniform, Robust & Reliable Customised Versions Available On Request



**Support Services**  
**Equipment Support Options**

Inseto Support Services For Preventative Maintenance, Emergency Breakdowns, Training Courses, Process Assistance & Development, Annual Calibrations etc.

# Microelectronic Materials Division

Inseto's Microelectronics Materials Division provides assembly materials and machine consumable items for the semiconductor, photonic and hybrid assembly industries.

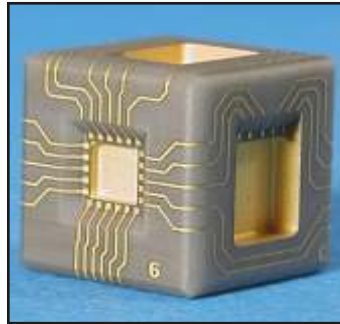
Products include precision machined ceramics, thin-film metalised substrates in 2D & 3D, thick film conductive pastes, hermetic packages and housings, die & wire bonding materials and consumables, parallel-gap electrodes and thermodes, and dicing blades for all applications.

Full technical support is available, including process and production expertise, with UK stock holding and next-day delivery options also provided.



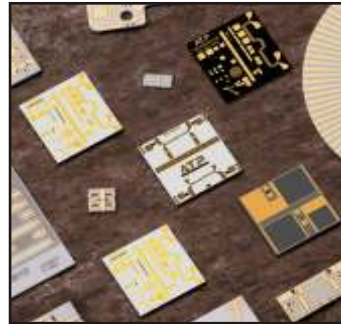
**Microcertec**  
**Precision Ceramics**

High Precision Grinding, Machining & Micro-machining Of Alumina, Zirconium Oxide, Aluminium Nitride, Sapphire, Silicon, Piezoelectric, Silicon Carbide & Silicon Nitride Ceramics.



**Microcertec**  
**3D Metalised Ceramics**

Advanced Precision 3-D Ceramics In Alumina, Quartz & Aluminium Nitride. High Accuracy Laser Etching With Seed Layers Of Ti/Pt or Ni/Cr, & Gold Finish. For MEMS & Microelectronic Applications.



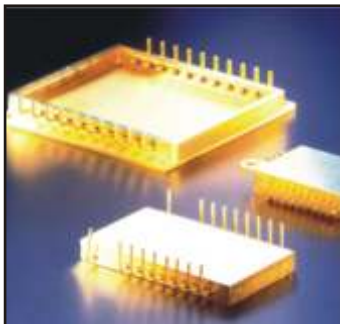
**ATP**  
**2D Metalised Ceramics**

Thin Film Circuitry On AlN, Alumina, BeO, Fused Silica & Sapphire. Full Capabilities With Integrated Resistors, Vias, Wrap-Arounds etc.



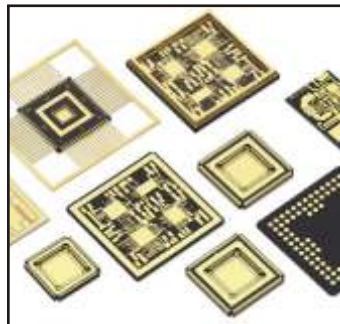
**Koartan**  
**Thick Film Materials**

Thick Film Pastes Including Silver & Gold Based Conductors, Dielectrics & Glazes, Resistors & Thermistors, Capacitors & Etchable Conductors etc.



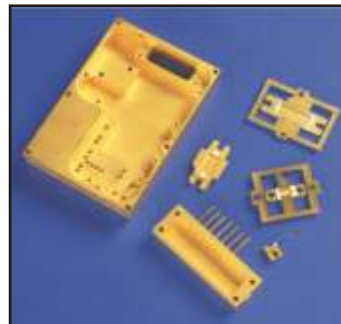
**Century Seals**  
**Glass Sealed Packages**

Hermetic Packages Including Butterfly, Bath-Tub, Platform, High Power, Feed-Throughs, Transistor Outline TO-Header For Low/High Power Devices



**Plansee**  
**Co-Fired Ceramics**

HTCC Packages Multi-Layer MCM's, PGA's High I/O Interconnects Matched Metal Systems Power, RF & FO Applications



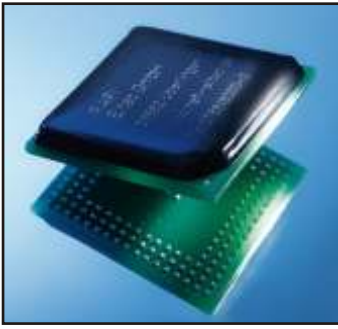
**Plansee**  
**Thermal Materials**

Copper Tungsten (5 Grades) Copper Molybdenum Cu-MoCu-Cu Laminate Silver™ VHTC Diamond Composites



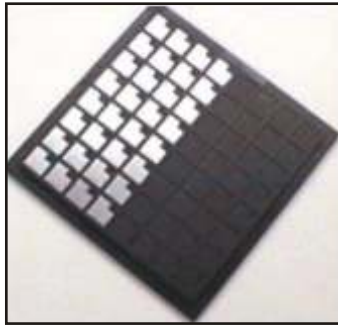
**Chelsea Technology**  
**Hermetic Package Stockist**

Off-the shelf TO-3, TO-5, TO-18, TO-46, TO-25X, LCC's, Ceramic PGA's, Cerdip's, SOP's, Side-Braze, and Metal Hybrid Packages



**DELO**  
**Die Attach & Encapsulation**

Globtop & Dam - Fill  
Anhydride Curing Epoxies,  
with Low CTE & High Tg.  
Low Temperature mCD  
Epoxies & UV + Heat Cured  
Epoxies For Die Attach.



**SPM-Coining**  
**Solder Preforms & Ribbon**

Eutectic Gold Alloys  
All Indium, Tin / Lead & Other  
Alloys. Wide Range Of Open  
Tools Or EDM For Special  
Profiles & Shapes



**SPM-Coining**  
**Bonding Wire & Ribbon**

Gold - 12.5µm upwards  
Aluminium - Up to 500µm  
1% Silicon Aluminium  
0.5% Mg Aluminium  
Silver etc.



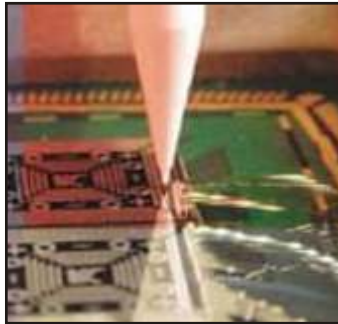
**SPM-Coining**  
**Clad Metal Stampings**

Base Materials Of Copper,  
Kovar, Molybdenum etc.  
Clad With Solder, Or  
Aluminium, Stamped To  
Requirement. Extensive Open  
Tool List. Packaged In Waffle  
Paks, Tape & Reel or Vials



**Micro Point Pro**  
**Bonding Wedge & Tab Tools**

An Extensive Selection Of  
Standard & Deep Access  
Wedges For Au, Al, Cu, & Pd  
Wire And Ribbon Bonding.  
Compatible With All Manual  
& Automatic Wedge Bonder  
Systems.



**Kulicke & Soffa**  
**Capillaries**

Market Leading Micro Swiss  
Capillaries For All Gold And  
Copper Ball & Bump Bonding  
On Either Manual Or Fully  
Automatic Bonders. BPP  
-Bond Pad Pitch Capability  
Down To 25 microns.



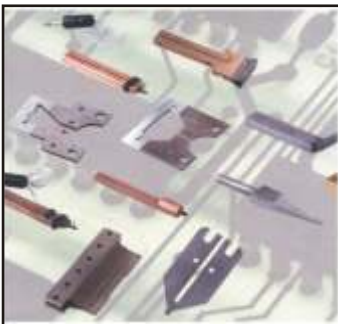
**Micro Point Pro**  
**Die Bonding Tools**

A Comprehensive Range Of  
Tools Including Rubber, Delrin  
Tungsten Carbide, Vespel &  
Ceramic For Eutectic, Flipchip  
& Adhesive Bonding. Eject  
Needles, Dispensing Heads  
& Tooling, Compatible With All  
Die Attach / Die Sort Systems.



**Craftronics**  
**Assembly/QA Consumables**

Die Pick-up Tips - Rubber,  
Plastic, High Temp, Die  
Collets, Eject Needles,  
Stamping Tools, Dispensing  
Nozzles, Royce Wire Pull  
Hooks & Shear Tools etc.



**AIT**  
**Electrodes & Thermodes**

For Parallel Gap Welding  
& Reflow Soldering/Bonding.  
Available In All Standard &  
A Range Of Custom Alloys  
Manufactured To Exacting  
Specifications.



**Kulicke & Soffa**  
**Wafer Frames & Cassettes**

Frame Sizes Accommodate  
Wafers & Substrates From 3"  
Up To 12" Manufactured From  
Hardened Magnetic Stainless  
Steel With An Electro-polish  
Surface Finish. Cassettes Are  
Available In Styles And Sizes  
To Accommodate All Frames.



**Kulicke & Soffa**  
**Hub Dicing Blades**

Hub Blades For Advanced  
Semiconductor & Package  
Dicing. For Silicon, Copper  
& Low-k Metallised Wafers.  
Bevel-series Blades For LED  
Dicing. New Uni-plus Series  
For Package Singulation..



**ADT**  
**Hubless Blades & Flanges**

Resin Bonded Dicing Blades  
For Hard & Brittle Materials.  
Metal Sintered Blades For  
Medium to Hard Materials.  
Nickel Bonded Blades For  
Soft Materials. High Precision  
Flanges For All Blade Types.

# Adhesives Division

Inseto's Adhesive Division provides technically advanced adhesives for bonding, sealing & encapsulation throughout the UK & Ireland.

Exclusively representing DELO Industrial Adhesives in the UK & Ireland and ACC Silicones in the UK, our adhesive division has the technical expertise to advise on all your project requirements.

Our experienced specialists will help with product selection, lab testing, trials, qualifications and application methods.



## **Company Overview**

ACC, part of the Amber Chemical Group, is an indigenous UK manufacturer of silicone adhesives, sealants and gels.

## **ACC Silicones Sealants & Adhesives**

One- & Two-Part Silicones, Cured By Moisture Or Heat, Excellent Flexibility, UV & Chemical Resistance, Resistant To Humidity & Water, Automotive & Aerospace Approved

## **ACC Silicones Encapsulants**

Protection Against Mechanical & Thermal Shock, Vibration, Chemical Attack, Humidity & Extreme Temperature Variations. Thermally Conductive & Optically Clear Options.

## **ACC Silicones Gels**

For LED Protection & Other Electronic & Medical Applications. Soft Stable Gels Provide Reduced Thermal Stress, Vibration Control, & Optical Clarity. Excellent Electrical Properties.



## **ACC Silicones Thermal Transfer Silicones**

Highly Thermally Conductive Silicones For Adhesion, Sealants, Fit-In-Place Gaskets. Prevent Movement & Void Formation. Eliminate Mechanical Fixings In Heat Sink Applications.



## **ACC Silicones Conformal Coatings**

Silicone Or Acrylic Coatings For Sensitive Electronic Assemblies. Especially Suitable For Use In Harsh Environmental Conditions. Fluorescent Trace For Ease Of Inspection. Spray, Dip or Brush.



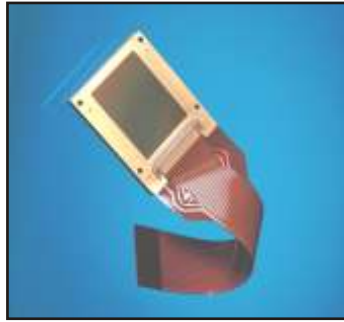
## **ACC Silicones Other Silicone Products**

Primers, Silicone Greases, Antifoams, Silicone Emulsions, Moulding Rubbers, PCB Cleaners & Silane Cross-Linkers.



## **Company Overview**

With over 50 years experience in the technical adhesives sector DELO are one of Europe's largest indigenous manufacturers of advanced, high-technology adhesives.



## **DELO-KATIOBOND** **Light Activated Epoxies**

UV Curing & Light Activated Epoxy Adhesives. Single Part Solvent Free Epoxies For Bonding, Sealing And Potting In Opaque Or Translucent Applications.



## **DELO-PHOTOBOND** **Light Cured Acrylics**

UV Curing & Light Curing Acrylic Adhesives. Single Part Solvent Free Adhesive, Which Cure With Visible Or UV Light. Ideal For Rapid Bonding, Sealing & Joining Of Plastic, Metal & Glass.



## **DELO-DUALBOND** **UV+Heat / Moisture-Cured**

Using a combination of light (UV or VIS) and either heat or humidity to achieve full cure, they are used in applications with Shadow Zones, or where a very quick initial handling strength is required.



## **DELO-MONOPOX** **One Part Epoxies**

One-part Heat Cured Epoxy Adhesives. Rapid Cure And Quick Gel Versions For Use With Mould Construction, Porous Materials, Potting Of Electronic Components & Parts Carrying High-voltage



## **DELO-DUOPOX** **Two Part Epoxies**

High Strength, Two-part, Cold Cured Epoxy Resin Adhesives, For Bonding, Casting And Sealing Of Joints Where Curing With Heat Is Not An Option. Excellent Adhesion To A Wide Range Of Materials



## **DELO-ML** **Anaerobic Adhesives**

Anaerobic Curing Adhesives For Metal Bonding, Thread Locking, Sealing Flanges, Shaft And Hub Joints etc. Provides High Compression And Shear Strengths & Excellent Thermal Stability.



## **DELO-CA** **Instant Adhesives**

Cyanoacrylate Adhesives, Moisture Curing For General Bonding Applications. More Commonly Known As Super Glue Or Instant Adhesives They Provide An Initial Bond Strength In Seconds.



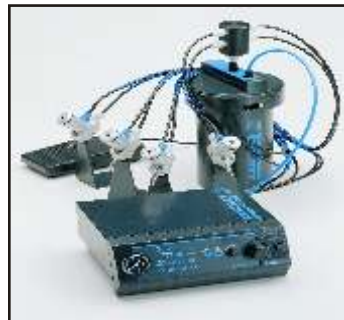
## **DELO-GUM** **Silicone Adhesives**

Moisture Cured Silicone Adhesives. Excellent Resistance To Temperature, Weathering, Ageing & With A High Elongation At Tear. For Fixing, Sealing And Potting..



## **DELO-PUR** **Polyurethanes**

Two-part Cold Curing Adhesive For Bonding, Casting & Sealing Of Joints. Available In DELO-AUTOMIX Cartridges For Use In High-strength Applications Where Flexibility Is Required Or



## **DELOMAT** **Dispensing Equipment**

For Semi To Fully Automatic Dispensing, With Up To 4 Independently Controlled Work Stations. Universal Dispensing From Pressure Tank, Cartridge, & Syringe. For Low Viscosity To Pasty Adhesives.



## **DELOLUX** **Curing Equipment**

For Optimum Processing Of Light-cured and UV Cure Adhesives DELO's range of Portable & Stationary Discharge or LED Lamps ensure fast curing, together with a reliable process.



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