



**Adhesives, protective  
materials and equipment  
for medical device  
assembly**

ISO 10993 and USP Class VI adhesives and associated mixing, dispensing and curing equipment, designed to help you achieve process reliability, repeatability and validation.

**intertronics**

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# As a medical device manufacturer, you need:

- Adhesives and protective material which bond to your substrates, withstand the rigours of your product end-use, and comply with the regulatory needs of the industry
- Synergistic material and equipment technologies which enable your processes to be highly efficient, reliable and repeatable
- The assurance that your validated process is verifiably and consistently in control

## That's precisely what we bring.

As well as products for bonding the plastics, metals, ceramics, glass, and other substrates frequently used in medical device manufacture, we offer protective materials for coating, sealing, gasketing and temporary masking.

We recommend and supply the equipment you need to mix, apply and cure these materials, as well as products for surface preparation and understanding the substrate and optimising

adhesion. Many of our products provide you with real-time visual verification of process integrity, making process development and quality inspection faster and easier.

**We have experience in providing coordinated systems of materials and equipment – allowing you to develop an efficient and robust assembly process, able to be validated, with speed and confidence.**

### Our materials are proven in applications including:

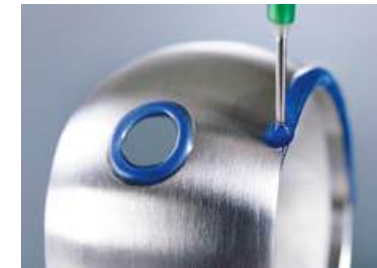
- Catheters
- Needles, cannulas & syringes
- Tube sets & plastic components
- Reservoirs & housings
- Diagnostic & testing devices
- Blood filters & oxygenators
- Endoscopes
- Surgical & dental instruments
- Wearables
- Hearing aids
- Medical electronics
- Respiratory care
- Orthopaedic implants
- Ophthalmic instruments

### Our materials are:

- ISO 10993 and USP Class VI
- Solvent-free
- Fast-cure
- Sterilisable
- Available in various viscosities
- Available in various hardnesses
- Designed to adhere to most typical substrates used in your industry



# Materials



## Dymax Bonding and Masking Materials for Medical Devices

### Catheter Assembly Adhesives

Dymax CTH adhesives cure in seconds under LED or UV/Visible light and meet ISO 10993 standards. They bond to materials such as stainless steel, nitinol, polycarbonate, and ABS, and are used in catheter assembly processes like Y-connectors, balloon bonding, and marker bands.

### Single-Use Plastic Component Adhesives

Dymax MD® adhesives bond a range of medical-grade plastics in seconds using light, helping reduce work-in-progress and assembly time. They're used for assembling components such as breathing circuits, syringes, and blood collection sets, and meet ISO 10993 requirements.

### Needle, Cannula and Syringe Bonding Adhesives

Dymax MD® adhesives are designed for fast, light-curing performance on automated syringe assembly lines, with blue or red fluorescence for in-line inspection. They bond plastics, metals, and glass in devices including syringes, winged infusion sets, and dialysis components.

### In-Vitro Diagnostic Device Adhesives

Dymax adhesives simplify bonding of difficult substrates like COC and COP, allowing unlimited open time before curing with light. Technologies like See-Cure and Ultra-Red® fluorescence help with visual confirmation during assembly of diagnostic slides, microplates, and lab-on-chip devices.

### Orthopaedic Implant and Surgical Instrument Masking

SpeedMask® materials cure quickly with light and provide clean removal after surface finishing processes such as peening, plating, or plasma spray. They're used to protect polished or machined surfaces on implants like knee, hip, and shoulder components.

### Wearable Medical Device Adhesives

The 2000-MW series is free from IBOA and TPO, and supports the assembly of wearable medical devices requiring low irritation and good skin compatibility. These light-curable adhesives are tested to ISO 10993 standards and bond to materials like stainless steel, TPU, and low-surface-energy plastics.



# Materials



## Dymax Medical Grade Adhesives, Coatings & Masking Materials

Dymax UV/visible cure medical grade adhesives cure in seconds on exposure to ultraviolet and/or visible light. Certified to ISO 10993 and USP Class VI, they provide clear, high-strength adhesive bonds in the assembly of many types of device.

They are compatible with gamma, EtO and E-Beam sterilisation. Dymax UV/visible cure adhesives are single-part chemistries, so require no mixing. Formulations are available which are optimised for UV LED curing.

- **See-Cure® Visual Placement & Cure Validation**

See-Cure® technology provides visual cure validation that makes it easy to confirm placement and cure integrity by eye or using automated optical inspection. Blue when uncured to indicate location on the substrate, the adhesive becomes colourless when correctly cured, providing easy confirmation of a secure bond.

- **Ultra-Red® Fluorescing Inspection & Authentication**

Ultra-Red® technology facilitates bond line inspection processes and product authentication. The material appearance changes from colourless to bright red when exposed to black light.

*Dymax Encompass™ technology combines See-Cure and Ultra-Red Fluorescing features into one light-curable product.*



# Materials



## Opti-tec Epoxy Adhesives

Opti-tec medical device epoxy adhesives are two-component non-cytotoxic formulations which meet ISO 10993. The line caters for the demanding and wide-ranging requirements of many specific applications including high temperature bonding, and clear potting and encapsulation for medical devices including endoscopes.



## Polytec PT Adhesives

The Polytec PT range of ISO 10993-approved, two-part epoxy adhesives includes products for electrically conductive and optical applications. They are available in process convenient packages, including pre-mixed and frozen syringes.



## Born2Bond Medical Grade Cyanoacrylates

Born2Bond's medical-grade, low-odour, low-bloom, solvent-free cyanoacrylate adhesives offer exceptional product stability and high speed cure. They may be tested for suitability with opaque and difficult to bond substrates including ABS, stainless steel, polycarbonate, PVC and aluminium.



# Dispensing



## Fisnar Dispensing Systems, Accessories & Consumables

The Fisnar range of fluid dispensing equipment includes compact, entry-level benchtop time/pressure controllers, pressure pots and dispensing valves together with all barrels, cartridges, tips/needles and many other consumable items.

## Fisnar Dispensing Robots

Our benchtop and gantry robots help to automate your material placement with accuracy and consistency. They can be used in conjunction with any of our automatic dispensing systems and where necessary, configured with your existing or new processes. We also supply a rotary table for dispensing circular patterns of adhesives and sealants.



*Fisnar F4000  
ADVANCE series  
of robots*



*Benchtop time/pressure dispensing controller*

# Dispensing



## preeflow Precision Volumetric Dispensing Systems

The preeflow eco-PEN, eco-DUO and eco-SPRAY precision volumetric, positive displacement systems deliver accurate and repeatable dispensing of one and two-part materials with a wide range of viscosities. They offer +/- 1% accuracy, 99% of the time, with total control and no stress to the material being dispensed.



## Vermes Microdispensing Jetting Valves

Vermes microdispensing valves use non-contact jetting technology, combining high accuracy and repeatability with the ability to dispense/dose ultra-low volume material deposits. Jetting facilitates high speed operation and greater throughput.



## flowplus<sup>16</sup>

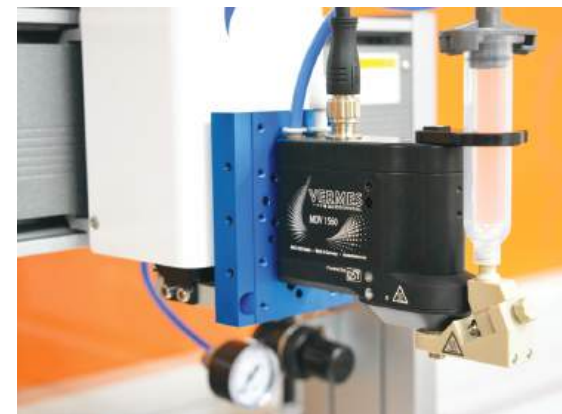
flowplus<sup>16</sup> helps to deliver optimum process assurance for fluid dispensing or dosing applications where accuracy is critical. The compact, inline, through-flow fluid sensor detects issues such as inconsistent material feed, clogging needles or nozzles, unsuitable needle-to-substrate distance or the presence of air bubbles.



*preeflow eco-PEN precision volumetric dispensing system*



*flowplus16 inline fluid sensor*



*Vermes microdispensing jetting valve*

# UV Light Curing Equipment

## Dymax UV Flood & Spot Lamps

Dymax UV curing lamps are available as spot, flood and conveyor systems, and in various sizes and intensities to suit different applications.

LED UV curing technology offers curing of materials in seconds, instant on/off (no warm-up or cool-down period), no bulbs to change and virtually no intensity degradation over time, resulting in a highly repeatable and validatable curing process.

Dymax radiometers provide accurate measurement of emitted energy, for assured process control.



Dymax accu-cal 160 radiometer



Dymax BlueWave FX-1250 LED UV flood curing system



Dymax BlueWave MX-150 LED UV spot curing system



Dymax BlueWave MX-275 LED UV curing system with 4-channel controller

# Metering & Mixing



*preeflow eco-DUO precision volumetric mixing and dispensing system*

## **preeflow eco-DUO Precision Meter/Mix/Dispense System**

The preeflow eco-DUO meters, mixes and dispenses a wide range of 2-part materials – including adhesives – with absolute control. It is a precision volumetric, positive displacement system providing a high degree of accuracy and repeatability.

## **THINKY Mixers**

THINKY mixers are non-contact 'planetary' mixers for adhesives and all other multi-part compounds. Mixers mix, disperse and degas your materials in seconds to minutes, in a sealed or lidless container such as a jar, beaker, syringe tube or cartridge. The mixers are available in a range of sizes and capabilities – with or without integral vacuum.



*THINKY mixing and degassing machine*

**preeflow**  
by ViscoTec

THINKY

# Surface Treatment



*PiezoBrush PZ3 for handheld plasma surface treatment*

## Relyon Plasma surface treatment for medical device manufacture

Cold atmospheric pressure plasma from Relyon Plasma offers a clean, efficient way to prepare surfaces for bonding in medical device manufacture.

It improves your adhesion and wettability, while also cleaning, disinfecting, and functionalising a wide range of substrates - many of which have low surface energy and are difficult to bond.

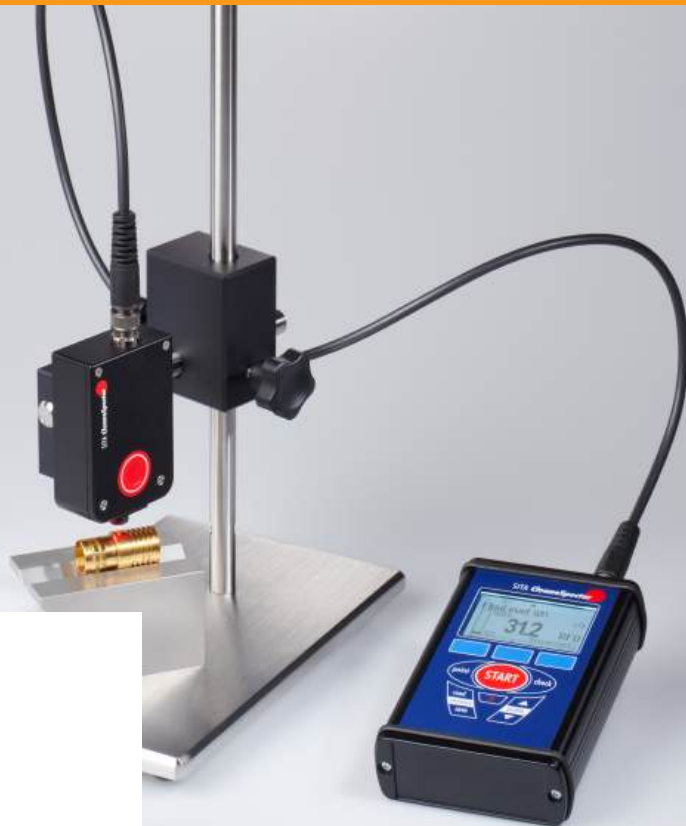
By initiating physical and chemical reactions at the surface, plasma treatment modifies materials without the need for additional chemicals. It increases surface energy, enhances wettability, and removes contaminants that could otherwise compromise bond strength.

Applications in dentistry include activating implant materials like PEEK for optimising wettability and acceptance of human tissue.



*PiezoBrush PZ3-i for semi-automated or automated plasma surface treatment*

# Surface Testing and Measurement



*SITA CleanoSpector handheld metal cleanliness test instrument*

## SITA CleanoSpector

Evaluate surface cleanliness in real time – on the production line, at your cleaning station, or in the lab. Detect organic contaminants such as oils, greases, coolants and release agents on metal substrates, supporting quality assurance for bonding or coating processes.



## Dyne Pens & Inks

A fast, cost-effective method for checking surface wetting and cleanliness of polymer-based materials. Suitable for initial process checks or production-line verification.

**DYNE**  
TESTING



*Dyne Test Pens for surface energy measurement*

# archytas series robot integrations for your bonding process

We don't just supply medical device adhesive materials and equipment; we can put the constituent parts together to create a ready-to-use system for your application.

With our **archytas series** of robot integrations, we have the capability to custom assemble material mixing, dispensing and application, curing, and/or surface preparation on one machine, providing you with productivity-boosting consolidated and automated processes. Each machine is specified and built to your unique needs, and will consider:

- part size and geometry
- number of parts
- part tooling
- jiggling
- surface preparation
- mixing
- material feed

- dispensing, spraying or jetting
- curing
- real-time dispensing feedback
- vision-based programming and fiducial auto-adjustment
- dispensing tip alignment
- control systems
- safety enclosure
- light curtain or interlocking doors
- benchtop or free standing

These robot integrations are built in-house, allowing us to supply a completed system built to your requirements in a timely manner. We can also provide installation and training to have you up and running quickly.

You can find examples of **archytas series** robot integrations on our website, or speak to our team about your requirements.



archytas series robot integrations



Benchtop dispensing robot integration



Dispensing robot with vision and UV curing

# Comprehensive knowledge, seamless support

When you work with Intertronics, we will endeavour to fully understand your objectives, product design brief and assembly process. We can work with you during substrate selection, process design and process validation through to implementation, test & inspection and quality assurance.

We partner with leading international material and equipment suppliers to ensure that we always deliver market-leading production solutions. Apart from having the requisite quality and performance approvals, they are rigorously selected by us to ensure they provide the products best suited to our customers' needs – supported by excellent service, technical support and delivery.

When you have chosen to use our products, we will meet your delivery expectations – not just in terms of timeliness, but accommodating all of your requirements such as multiple deliveries or call-offs.

We will also provide ongoing support and technical advice throughout the product lifecycle and beyond, on to your next project.



Our Technology Centre acts as the perfect domain for you to validate your material choices and evaluate new production processes before you commit to the materials and equipment for your application.

Based in Oxfordshire, the Technology Centre is well-equipped with different robots, dispensers, UV curing lamps, mixers, plasma surface treatment systems, and surface measurement instruments. We also workshop different material options with your parts and do proof-of-concept trials with you.



LET'S START BY TALKING ABOUT  
**YOUR APPLICATION**

**We welcome the opportunity to discuss your current or forthcoming assembly application with one of our Product Specialists.**



Please contact us with your enquiry:

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