



Solutions for Medical Industry

SOLDERING-CLEANING-COATING

INVENTEC
PERFORMANCE CHEMICALS

INSPIRING INNOVATION



SPECIFIC
PROCESS



EXCELLENT
COMPATIBILITY



OPTIMIZE
PROCESS



ENVIRONMENTALLY
FRIENDLY

DEHON GROUP

A FAMILY COMPANY CREATED IN 1874,
FIRST SPECIALIZED IN THE FILLING AND
DISTRIBUTION OF REFRIGERANTS.



Today, the group with its 4 companies is dedicated to:

- Refrigeration, air conditioning and heating with Climalife;
- Car care with SMB auto;
- High Performance Chemistries with Inventec;
- High-risk chemicals with Soderec International.

Because of its products technical performance, its market responsiveness and its continuous research for sustainable solutions, the Dehon group is leader on these 4 markets in Europe, Asia and North America.

The Dehon group generated a 275 million Euros revenue in 2018 and employs more than 500 employees in 5 continents (Africa, Americas, Asia, Europe, Oceania).



INVENTEC PERFORMANCE CHEMICALS

Inventec proposes products and services for precision cleaning, electronic assembly and surface treatment.

These applications are dedicated to a wide range of industries: aeronautics, automotive, energy, medical, semiconductor and telecom.

Inventec is one of the leading companies in chemical innovations and in sustainable applications of these innovations protecting health and environment.

Over 3 000 substitutions of chemicals have been accomplished in highly technical processes in Europe, Asia and North America.

Substitutions were done in areas as diverse as the cleaning of luxury watches, decontamination of liquid oxygen pipes in the aeronautics industry, lead-free soldering, etc.

All these substitutions allowed to reduce considerably the risks linked to products and their use.

INVENTEC'S FIGURES

- 100** employees 1/3 are engineers
- 40** years of expertise in high tech markets
- 65** million Euros revenue in 2018
- 50%** of the revenue generated outside of France
- 10%** of the revenue is invested in research & development

OUR GUIDELINES

- **PROXIMITY:** 3 R & D laboratories, 9 production sites, 11 subsidiaries + 12 distributors.
- **PERFORMANCE:** specialized teams and effective technical solutions to serve our customers.
- **PROTECTION:** friendly solutions for users and the environment.

PRODUCT SOLUTIONS

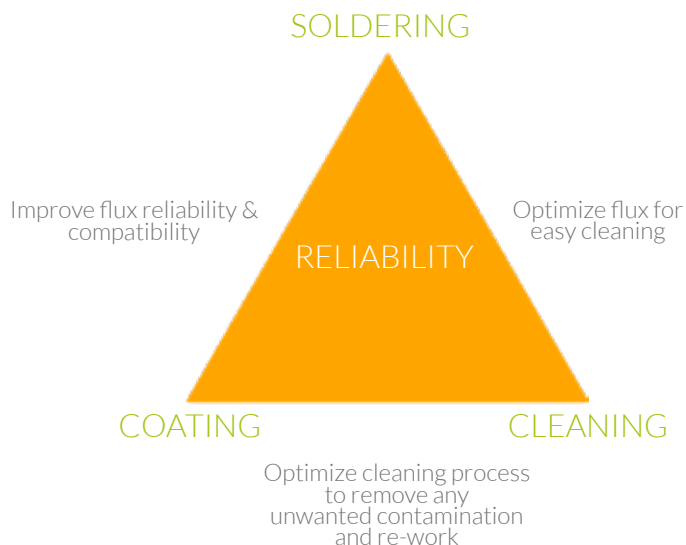
ONE STOP SOLUTION PROVIDER

Inventec is unique in the market, providing **SOLDERING**, **CLEANING** and **COATING** solutions for electronics and mechanical parts.

These 3 product solutions are very close related. In order to opt for the greatest reliability of your device or to meet medical standards, it is imperative to clean flux residues after soldering or to remove any unwanted contamination on your parts.

It is generally recommended to clean before coating in order to create a perfect adhesion between substrate and coating or to prevent any corrossions which still can occur due to remaining flux residues trapped under the coating.

However, there are applications where cleaning could be avoided after all. In this case it is important that remaining flux residues have very little impact on the reliability or when coating is required, an excellent compatibility between coating and flux is achieved.



Whatever your needs or requirements, Inventec has a tailor-made solution to offer you. Needless to say that talking to 1 supplier who understands very well these 3 processes is more efficient in order to achieve the desired outcome at the lowest cost of ownership.

GREENWAY

SUSTAINABLE DEVELOPMENT REQUIRES A CONTINUOUS EFFORT

Inventec decided to go further and to implement a continuous sustainable development approach. While maintaining our solutions at a high level of technical and economic performance, we also define our products by their key impact parameters on health and environment.

If our engineers improve, significantly, 1/3 of parameters without degrading any of the others, we give the **GREENWAY™** "label" to a product.

GREENWAY™, is the 1st "label" of sustainable development created by a SME in the chemical industry.

*Up to now, in our high technology sectors, there are no standards defining products or services that are healthier or environmentally friendly, beyond regulations. Therefore the Greenway label is validated by **Bureau Veritas** as well as the products conformity to the new specifications.*

Label given if 1/3 of 10
Parameters are improved

- 1 TOXICITY
- 2 FLAMMABILITY
- 3 CORROSIVITY
- 4 ECOTOXICITY
- 5 VOC CONTENT
- 6 GWP AVERAGE VALUE
- 7 BIODEGRADABILITY
- 8 COD
- 9 BIOACCUMULATION
- 10 CONTENT IN NON-RENEWABLE RAW MATERIAL

SOLDERING



PRODUCTS MADE FOR HIGH RELIABILITY

Electronics in medical devices requires exceedingly high quality and reliability due to their role in safeguarding human lives. Failures in the electronic control unit of drug delivery devices or pacemakers could be catastrophic. So it is key to minimize the risk and liability of the producer. Those medical devices should operate in a stable and reliable condition. There is basically no room for error and malfunction over time.

Achieving this high level of excellence depends on the selection of high quality components and materials but also paying great attention to the soldering process and solder materials used.

Inventec is known in the market as a specialist in high reliability applications. 20 years ago, we were one of the first to measure corrosion impact of our flux residue by the BONO test and used this data to optimize the flux formulation to create solder pastes with extremely low corrosivity. Over these years, we have built up a strong know-how to balance our solder pastes in terms of corrosion impact but not diminishing printing & soldering performance.

Our Brands in soldering

ECOREL™

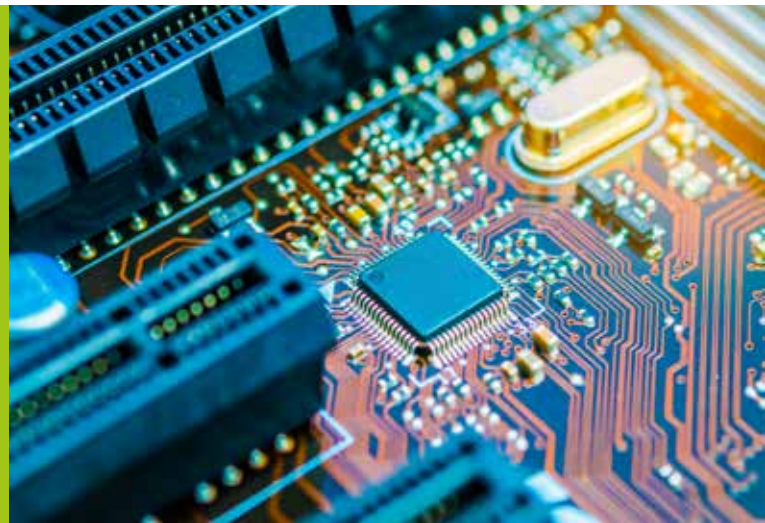
SOLDER PASTE RANGE

Inventec has a broad range of solder pastes with different alloys in powder sizes from T3 up to T6 and chemistries to take up today's challenges (low impact of flux residues, low voids %, non-halogen, thermal cycle performance, ...).

ECOFREC™

SOLDER FLUX RANGE

ECOFREC™ solder fluxes are specially designed to meet current challenges in wave and selective soldering and are available in both, solvent-based and water-based (no VOC).



COATING



PROTECTION & FUNCTIONALITY

To further improve the reliability of your devices even more by protecting them from the environment they are used in, a coating can be applied. Some coatings can also be helpful to reduce friction on introducers, tubes, needles and more.

In order to temporarily protect metal parts from corrosion in between production steps, an anti-corrosion inhibitor can be added into the cleaning chemical. This prevents costly rework without adding any additional step in your process.

To protect your PCBs boards with a conformal coating, Inventec can offer the latest innovative UV coatings, cured by LED UV. These coatings are VOC free, cured in a few seconds and use a fraction of energy compared with heat cured coatings.

Our Brands in coating

PROMOSOLV™ COAT

ULTRA-THIN COATING RANGE

Inventec's ultra-thin coating range is based on DryWired® 101X patented technology to protect electronics and other substrates.

ABCHIMIE™

CONFORMAL COATING RANGE

Inventec acts as a worldwide distributor for ABchimie conformal coatings. These coatings are tested with our Ecorel™ and Ecofrec™ solder materials in order to guarantee an excellent compatibility.

CLEANING



A SOLUTION FOR EACH PROCESS & APPLICATION

Medical device companies value safety, quality and predictability in order to maximize performance and minimize liability. With ever stricter medical norms and environmental regulations, it is a difficult decision what cleaning process to choose and which solution will remain valid for the years to come.

That is why we propose, according to the types of parts to be cleaned (implants, prosthesis, screws and other medical devices), the most adapted ranges taking into account their nature, the pollutants to be eliminated as well as the step of production in which they are located (surface preparation, inter-operation, finishing before sterilization). Our ranges are adapted to additive and subtractive manufacturing methods. We develop cleaning solutions of aqueous base (spraying and immersion) and on a solvent base (co-solvent, azeotropic and under vacuum).

With more than 50 years' experience in cleaning and closely involved in several government bodies related to sustainable use of chemicals, we are well placed to recommend you the best process or to propose alternatives for your existing process. All this with keeping **Performance**, **Environmental impact** and **Cost of ownership** at the core of our solutions.

Our cleaning brands

TOPKLEAN™

HYDROCARBON CLEANING RANGE

Our Topklean™ range are cleaners used in co-solvent system or as a single solvent in vacuum cleaning process.

PROMOSOLV™

SOLVENT CLEANING & DRYING RANGE

Our Promosolv™ range are mono-solvent cleaners used in a vapor phase cleaning process. Some of them can be used as rinsing agent in co-solvent process or in solvent drying process.

PROMOCLEAN™

DETERGENT CLEANING RANGE

This range represents our detergent range for water based cleaning in immersion or spray processes.

QUICKSOLV™

FAST EVAPORATING SOLVENT RANGE

This range represents our fast evaporating solvents, mainly used in manual applications.

FORMULATORS AND SPECIALIZED EXPERTS

IN THE MEDICAL SECTOR

IN ORDER TO RESPOND TO YOUR REQUIREMENTS



OUR SKILLS AND OUR BUSINESS

PROCESSES:

VAPOR PHASE, SPRAYING, IMMERSION, FLUSHING, VACUUM, MANUAL.

PRODUCTS:

FLUORINATED SOLVENTS, MODIFIED ALCOHOLS, A3 HYDROCARBONS, DETERGENTS, STRIPPERS AND COATING.

APPLICATIONS:

DEGREASING, OIL REMOVAL, DECONTAMINATION, POLLUTION CONTROL, STRIPPING.

SERVICES

INVENTEC'S LABORATORIES PERFORM ALL THE NECESSARY TESTS AND DEFINE THE PRODUCT AND PROCESSES MOST ADAPTED TO YOUR NEEDS.



LABORATORY TESTING
AND
ON-SITE START SUPPORT

To better meet your specifications, series of tests on your pieces may be needed. Once the stages of your process are defined, we support you in industrial testing for final validation and support you during the start of the process on sites.

QUALITATIVE ANALYZES OF BATHS

The use of solvents or detergents allows the production to meet performance criteria and reliability.

Analyzes carried out by the Inventec laboratory allow to:

- ✓ monitor the quality of a cleaning bath,
- ✓ adjust the change intervals for process requirements,
- ✓ support users in managing their processes in case of drift.



“An analysis helps you to find the optimal time to introduce fresh cleaning chemical and hence reduce your cost”

INVENTEC WORLDWIDE

9 INDUSTRIAL SITES ON 3 CONTINENTS



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