



Adhesives Research®

Medical Devices

Custom Adhesive and Film Solutions

Capabilities

Adhesives Research (AR) designs, develops and manufactures specialty pressure-sensitive adhesives (PSAs), tapes, films, coatings, laminates, release liners and product authentication technologies that enable our customers to do extraordinary things with their products.

A permanently independent, multinational company, AR is a trusted global leader in the PSA and coating industries with over half a century of experience in custom polymer synthesis, adhesive formulation, materials science and flexible manufacturing.

The AR product development team delivers fresh, innovative thinking driven by the desire to be our industry's most effective developer and high-quality producer of specialized products. We function as your true partner, an extension of your project team, dedicated to openly sharing our people, technology and processes throughout the project.

This passion for excellence is evident at each stage of our development process, resulting in tailored, high-performing products that ensure a successful, timely launch for your most challenging applications.

Collaboration and Innovation

The world's leading medical device manufacturers turn to Adhesives Research to develop innovative technologies to enhance their products. We bring a strong understanding of the industry and regulatory compliance that makes us the ideal collaborator for product development.

A leader in the pressure-sensitive adhesive (PSA) industry for over half a century, our expertise and capabilities in formulating, materials, cutting-edge manufacturing and customization give us the flexibility to develop highly specialized adhesive components. We offer an extensive range of manufacturing capabilities including polymer synthesis, adhesive mixing, coating, release liner design and production, and custom slitting/finishing.

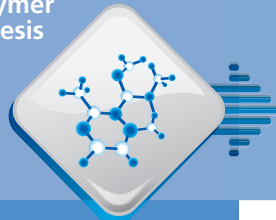
As your quality partner, our U.S. and European manufacturing facilities are based on ISO 9001:2008, ISO 13485:2003 and elements of cGMP (21 CFR 211 and 820). We do all we can to improve our customers' compliance to speed their products to market.



Raw
Materials



Polymer
Synthesis



Mixing &
Compounding



Casting &
Drying



The Secret to Adhesives Research's Success

Adhesives Research is committed to being the most effective partner in our field by collaborating with our customers in developing and producing specialized products. We do this by working hand-in-hand with our customers, and giving them direct access to our scientists and process engineers. From the beginning of the customer relationship, these specialists touch every step of the process, from prototype to final commercial production. It is this commitment to the team-based approach that has enabled us, and our customers, to become leaders in our fields. We consider our customers true partners and firmly believe that the best results are achieved through a collaborative effort.

Markets and Applications

Whether the project requires a completely new technology or a modification of one of our many standard products, our technology adds functionality to specialized applications in a number of markets:

Wound Care – skin-friendly, low trauma, long-term wear, and high MVTR products for applications in advanced wound care, ostomy and wound care diagnostics.

Diagnostics – clean, inert and proven pressure-sensitive adhesive technologies for biosensors (diabetes monitoring), point-of-care testing (blood gas/electrolytes, blood coagulation, cardiac monitors), immunoassays (fertility, drugs of abuse, infectious diseases) and molecular diagnostics.

Patient Monitoring – Skin-friendly, long-term wear and weight-bearing adhesives designed for skin-bonded medical devices that deliver therapies or monitor patient health for up to seven days.

Medical Devices – Pressure-sensitive adhesive-coated films, non-wovens, foams, laminating systems and electrically conductive PSAs for electrodes/labeling, medical instrumentation and assembly.

adhesivesresearch.com

Slitting & Packaging



Complete Testing of Raw Materials, Work in Process, Finished Roll Goods



Ship Roll Goods for Die-cutting & Packaging



The Ingredients

Experience and Technology

- Decades of experience supplying products for medical device applications.
- Technical and manufacturing facilities in North America and Europe.
- Process flexibility in polymer synthesis, formulation, coating and laminating.
- Specialization in developing technologies to solve the unmet needs of diverse markets.

Regulatory Compliance

We offer diverse manufacturing capabilities to produce medical device components under the appropriate Code of Federal Regulation requirements and ISO standards:

- Five isolated manufacturing lines for the production of components used in medical and pharmaceutical applications.
- Two dedicated manufacturing lines capable of processing active pharmaceutical ingredients.
- Quality system based on ISO 9001:2008, ISO 13485:2003 and elements of cGMP (21 CFR 211 and 820).
- Access to complete production records to support all clinical and commercial manufacturing requirements.

A Disciplined Approach to Product Development

We employ a cross-functional, team-based approach to product development. It features rapid prototyping, concurrent product and process development, and ongoing customer interaction from initial design to product launch. Our mission is to be the most effective company in our field at partnering with our customers in developing and producing specialized products.

The AR Product Development Process

Feasibility Assessment	Identification of customer needs, design input, timing and resources
Opportunity and Technology Development	Technology development, scale-up, field trials, process feasibility
Optimization	Process optimization and validation
Commercialization	Product launch, post-commercialization review



Technologies and Constructions

- Skin-friendly, low-trauma and long-term wear adhesives
- Hydrophilic PSA (heat-activated/coating)
- Hydrophobic PSA (heat-activated)
- Conductive adhesives and films
- Tight thickness tolerance spacers
- PCR-compatible adhesives
- Dissolvable films
- Optically clear/low auto-fluorescing adhesives
- Non-reactive adhesives

Technologies in Action

Hydrophilic coatings and adhesives:

formulated to manage moisture vapor transmission, biological fluid containment or flow for wound care, diagnostics and microfluidic devices.

Tight thickness tolerance spacers:

double-sided adhesive spacer tapes and coatings with tight thickness control for capillary flow devices where accuracy is essential.

Molecular diagnostic adhesives: Silicone adhesives designed to withstand the temperature cycling of PCR while remaining bio- and chemically-compatible with reagents, biomolecules and active ingredients.

Skin-friendly pressure-sensitive adhesives:

acrylic, polyisobutylene, silicone and hybrid chemistries formulated to deliver custom bonding characteristics including weight-bearing, low-trauma removal and extended wear times up to seven days.

Point-of-care assembly tapes: bio- and chemically-compatible tapes for creating precise microfluidic channels and protective overlays.

Optically clear/low auto-fluorescing adhesives:

ideal for low auto-fluorescent constructions and applications using fluorescent markers (micro-plates, covers, microfluidics) and assays or applications utilizing biofluorescence.

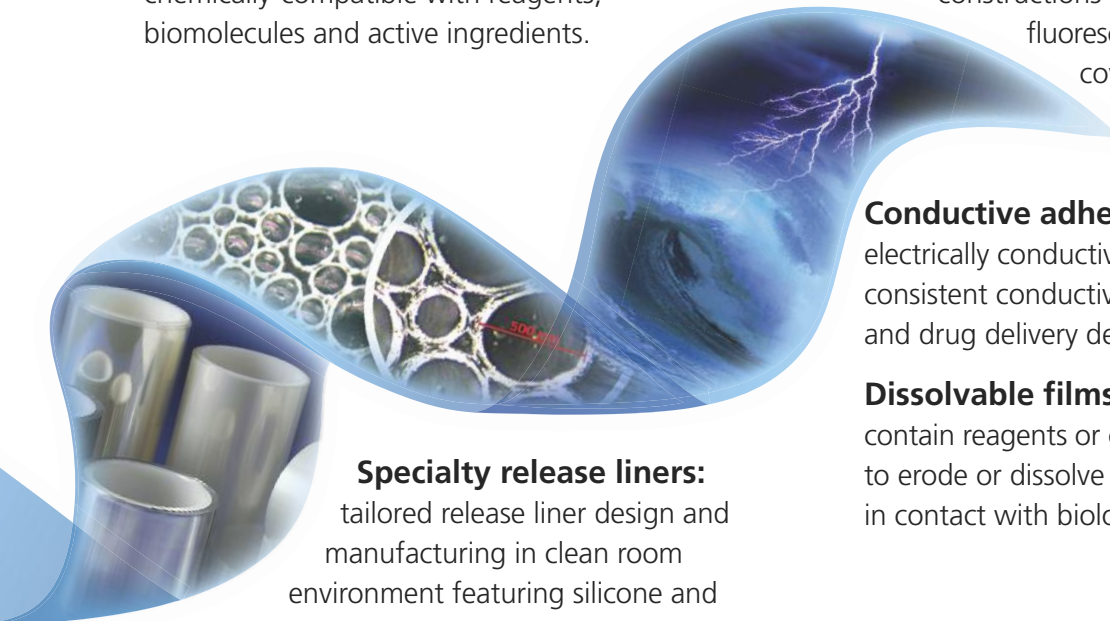
Conductive adhesives and films:

electrically conductive materials for stable and consistent conductivity in electrodes, biosensors and drug delivery devices.

Dissolvable films: polymer films that may contain reagents or other active materials designed to erode or dissolve at predetermined rates when in contact with biological fluids or other liquids.

Specialty release liners:

tailored release liner design and manufacturing in clean room environment featuring silicone and non-silicone, low extractable chemistries for applications demanding the highest quality, defect-free materials.





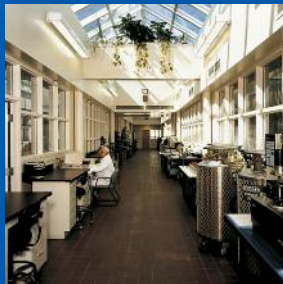
**Adhesives Research, Inc.
Corporate Office**

400 Seaks Run Road
Glen Rock, PA 17327 USA
Toll-free: (800) 445-6240
Phone: (717) 235-7979
Fax: (717) 235-8320



**Adhesives Research
Ireland Ltd.**

Raheen Business Park
Limerick, Ireland
Phone: +353 61 300 300
Fax: +353 61 300 700



**Adhesives Research Ltd.
United Kingdom**

Phone: +44 (0) 1371 878187



Adhesives Research PTE Ltd.

20 Maxwell Road
#10-06 Maxwell House
Singapore 069113
Phone: +65 6774 9580
Fax: +65 6777 7261

**Adhesives Research Shanghai
Representative Office**

Unit 3526A, Level 35 CITIC Square
1168 West Nanjing Road
Shanghai 200041, China
Phone: (86) 21 6150 4358
Fax: (86) 21 6135 7120

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A permanently independent developer and manufacturer of pressure-sensitive adhesives, tapes, specialty films, coatings, laminates, release liners and product authentication technologies.



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