



CLIFTON
Adhesive, Inc

Clifton Adhesive, Inc. is a manufacturer of solvent or water borne specialty, industrial adhesives and coatings. Founded in 1945, all aspects of this family owned business are located in Wayne, New Jersey. The various departments work closely together to achieve maximum output and efficiency. For our customers, an answer is only a phone call away.

Clifton Adhesive's product line consists of more than 400 active formulas used for various applications. When a customer has specific requirements, our chemists will customize an existing product or develop a new one. The Sales and Technical Departments work closely with one another to facilitate the progress of all new projects, making sure the needs of the customer are addressed. Samples are then provided for evaluation.

The current output is in excess of five thousand gallons per day from churns varying in capacity from 50-1000 gallons. Clifton has two mills enabling rubber-based products to have milled portions of the formula. Milling greatly enhances the chemists' ability to customize the end properties of a product. Through an efficient scheduling process, most orders are shipped within two weeks from the order date.

Clifton Adhesive, Inc. is always aware of the environment and emission standards while formulating. When possible, products have been reformulated using exempt solvents or those with lower VOCs. Water borne products are considered whenever feasible. Compliance with State and Federal regulations is a priority. The sales force works with the customer to encourage awareness and understanding of these regulations. The end users' equipment and capabilities are always considered while conforming to the regulations and standards.

Clifton Adhesive, Inc. is large enough to manufacture in volume yet small enough to provide "old fashioned" service.



MILITARY SPECIFICATION PRODUCTS

Clifton Adhesive manufactures a broad line of adhesives and coatings that meet Military Specification performance characteristics or are on the qualified product list.

| <u>Military Specification</u> | <u>Product Name</u> |
|-------------------------------|---|
| MIL-C-2399B | LA 495 |
| ML-C-9503B | PC 903 |
| MMM-A-139 *** | FA 1005 |
| MIL-A-5540B *** | FA 1030 (CLASS 1-5) |
| MIL-A-5540B *** | FA 1013 (CLASS 4 &5) |
| MIL-A-5540B *** | FA 1065 (CLASS 3) |
| MMM-A-1617 *** | FA 1053 (TYPE I) |
| MMM-A-1617 *** | FA 1051 (TYPE II) |
| MMM-A-1617 *** | FA 1076 (TYPE III) |
| MIL-S-43869A | FA 1101 |
| MMM-A-121B *** | E 1293 |
| MMM-A-180B | LA 2571 W |
| MMM-A-129 | LA 2589 W |
| MMM-A-179 | LA 2601 W |
| MMM-A-130B | CC 2956 (gov't cancelled) replaced w/CC5527 |
| A-A-1936 | CC 5527 |
| MIL-P-43700B | SS 3214 |
| MIL-C-1289F | PC 3627 |
| MIL-C-1975AC | PC 3775 |
| MIL-R-38212B | LA 3801 |
| MIL-R-38213B | SS 3807 |
| MIL-P-43700B | SS 3985 |
| MIL-C-19759C | PC 3941 |

*** On the qualified product lists, others meet performance specs.



TOLL MIXING (CUSTOM SOLUTIONS)

On a proprietary basis, Clifton Adhesive offers toll mixing and private labeling. Clifton's facility is designed for solvent or water based manufacturing. Various custom solution products currently manufactured in our facility are:

- Neoprene (Polychloroprene) adhesives and coatings
- CSM & CSPE Coatings (Hylpalon™)
- Acrylic adhesives
- Natural rubber adhesives
- Vinyl adhesives and coatings
- Polyester adhesives and coatings
- SBR adhesives and coatings
- Nitrile adhesives
- Urethane adhesives and coatings
- Ethylene vinyl acetate adhesive and coatings
- Specialty Polymers

Clifton Adhesive prides itself on confidentiality and service. The Quality Control Department performs quality acceptance testing on each lot of finished product manufactured.

We provide the same level of technical expertise and customer service for the adhesives and coatings we toll mix as we do for our own product line. If there is ever a raw material issue in a toll mix formulation, Clifton will provide a recommendation in regards to possible alternatives.



HEAT SEAL COATINGS

Clifton Adhesive has decades of experience in the textile market. We provide laminating adhesive for a broad range of textiles as well as various application processes. In addition to products used to bond textile, Clifton also provides fabric primers and coatings used to produce various polymer coated fabrics.

Heat Seal products are applied to a substrate, dried and heat reactivated to form a final bond. The coatings are deposited by different methods including knife over roll, gravure, reverse roll, screen print, brush, spray or roller. Depending on the system, heat sealing is performed either in line or at later date. Examples of various Heat Seal applications are:

- Films to metalized film
- Films to fiberglass
- Films to textile (ie: window treatments)
- Films to foam
- Textile for heat seal patches
- Decorative laminates
- Fire retardant heat seals for aerospace
- Food packaging
- Credit card lamination
- PVC to film
- Transfer decal film lamination
- Specialty heat seal applications

Clifton Adhesive will custom formulate a Heat Seal product to provide the required properties such as solids, viscosity, block resistance, clarity, heat seal temperature and end item environmental conditions.



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PRESSURE SENSITIVE ADHESIVES

Clifton Adhesive manufactures a broad line of solvent or water based pressure sensitive adhesives from a wide variety of base polymers. Examples of applications containing our products:

- Film to film lamination
- Felt lamination
- Specialty Tapes
- Gasket mounting
- Foam and sponge rubber
- Graphic arts
- Coated paper and board stock to polyester films
- Pattern paper to tricot
- Polystyrene lamination
- Pallet adhesive for screen printing
- Automotive
- Aerosol
- General purpose
- Medical

The Pressure Sensitive adhesives are formulated to a wide range of solids and viscosities depending on the customer's needs. Clifton's R & D lab designs the adhesives to specifications such as peel, shear, tack properties, fire retardancy and food or skin contact.



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FABRIC ASSEMBLY ADHESIVES

Clifton Adhesive is a market leader in the coated fabric assembly market such as inflatable fabrication. Our products are used for the fabrication of the following materials:

- Neoprene (polychloroprene) coated fabric to itself or Nylon
- Urethane coated fabric to itself or Nylon
- PVC (Vinyl) coated fabrics
- Hypalon™ coated fabrics and unsupported liner
- Natural rubber/Natural synthetic rubber coated fabrics
- Nitrile coated fabrics
- Butyl coated fabrics
- EPDM sheeting
- Specialty co-polymer coated fabrics

Used in Military, aerospace, industrial and retail applications, Clifton's one and two part solvent or water based adhesives may be applied via brush or roller. Examples of end products containing our adhesives are:

- Inflatable escape slides for aircraft
- Inflatable life rafts and life vests
- Helicopter floats
- Radiation shield devices
- Inflatable river rafting boats and pontoons
- Wet/dry suits, fishing waders, wet weather parkers & trousers
- Collapsible water tanks and fuel cells
- Specialty fabrication



TEXTILE ADHESIVES & COATINGS

Examples of our adhesives and coatings that are used in the textile industry follow:

ADHESIVES:

- Woven textile laminates
- Leather bonding
- Tricot to fiberfill
- Non woven lamination
- Foam bonding
- Films to foam
- Paper stock
- Vinyl
- Fiberglass to film
- Primer for Thermoplastic polymer coated fabrics

COATINGS:

- Heat seal
- Pressure sensitive adhesives
- Dry Bond
- Non-fray
- Fire retardant
- Conductive

Clifton's product line is tailored for specific applications and processing equipment. Our experience with a wide variety of polymers enables us to meet the customer's requirements. The solids, viscosity and dry speed are customized based on the substrate being coated, the coating method, and ability to dry.