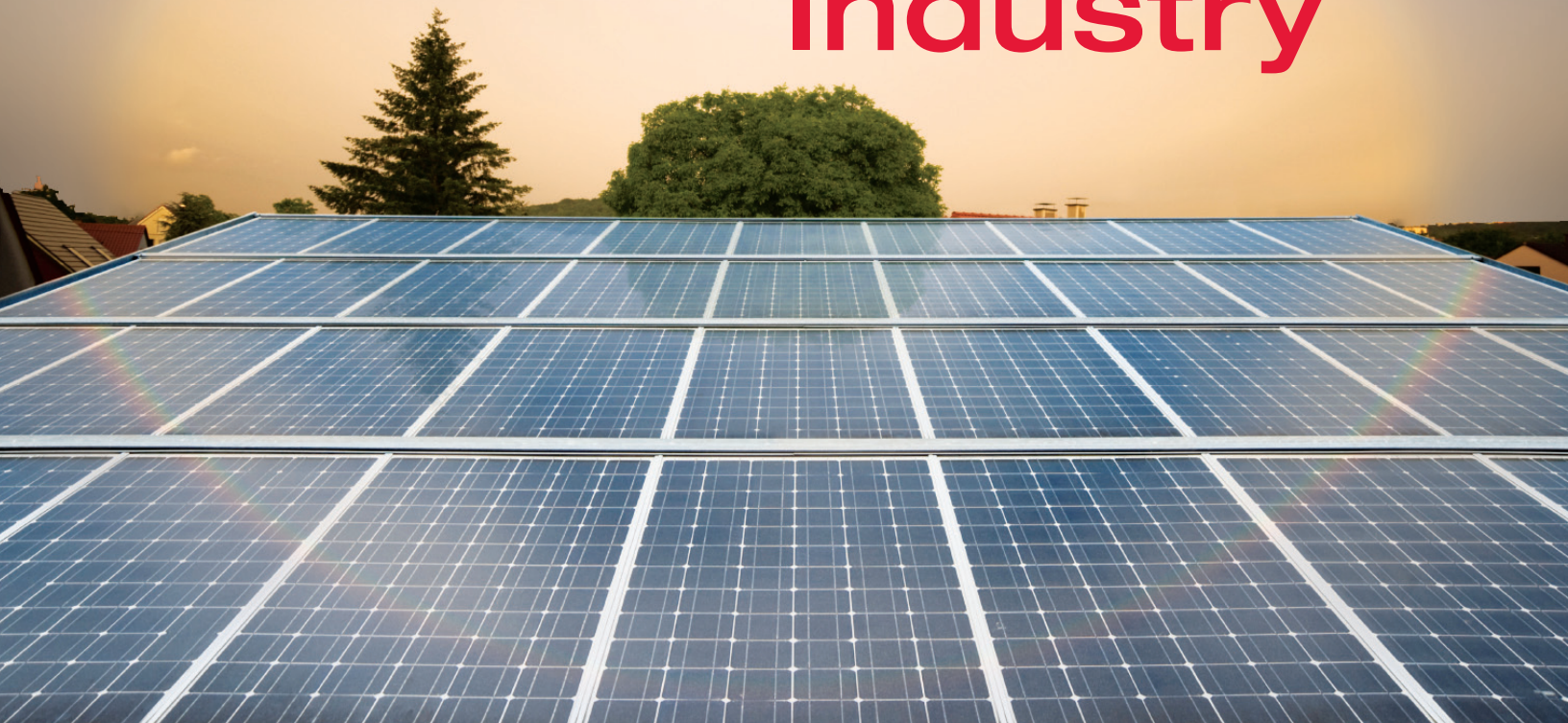




Material Solutions for the

Solar Industry





Are you looking for the right materials and solutions for your solar module manufacturing needs?

Our broad solar product offering ranges from adhesives, tapes, films, solar connectors, junction boxes, encapsulants, soldering materials, insulating technologies, laboratory supplies, clean room materials, packaging, and more.

Hisco® Can Help You Find the Right Technologies Today

Quality Products From Trusted Brands

For more than 40 years, our supplier base has grown to include world-class organizations such as 3M™, Alpha Metals, Brady, DuPont™ Kapton®, Henkel, Hosiden, Kimberly Clark, Loctite®, and Wacker.

Certified Solar Specialists

Hisco® provides the technical support and engineering expertise you need for new solar applications. Each solar specialist is required to participate in an extensive training that highlights the latest industry trends, emerging technologies, and application support. Our team of solar specialists are trained to assist in process development, material specification and selection, and product support. Our solar specialists are highly trained professionals who will understand your business and develop improved ways to serve you.



Local Inventory

The international Hisco® branch network includes 33 stocking locations - 24 in the United States (including Puerto Rico), and nine operated by the HiscoMex subsidiary in Mexico and one operated by HiscoCan in Canada. Four Precision Converting facilities provide value-added fabrication and custom packaging. Local inventory allows Hisco® to respond rapidly to standard, JIT, and emergency needs.



On-Time Delivery

Fast, friendly service is the core philosophy of our delivery operations; it is evident in our on-time delivery rate which exceeds 95 percent. Rush or emergency service is no problem – your Hisco® representative has the autonomy to get your products to you as fast as possible.

Documented Cost Savings

Hisco® understands the significance of reducing dollar per watt cost through effective supply chain solutions. In a nine-year period, we helped our customers realize cost savings and/or cost avoidances of more than \$62 million through our automated documented cost savings program. Not only do we create value, we document it. We'll supply a cost reduction form for your authorization that shows both direct and indirect benefits.



Materials for your **Solar Manufacturing and Installation Requirements**

Solar Connectors and Junction Boxes

Used for: Photovoltaic module assembly and field installation

- Cost effective standard (UL & TUV approved) junction boxes
- Pottant-free version offered
- Thin film and crystalline silicon options
- Customized junction box designs available
- Factory and field assembly connectors (MC-4 compatible)

Adhesives and Sealants

Used for: Junction box bonding, ingot bonding, concentrator assembly, frame assembly and system installation

- High-performance chemistries including silicones and hybrid polymers
- Outstanding shear and peel adhesion
- Rapid cure, UL-approved materials available
- Available in various delivery forms from films to cartridges to drums

Potting Compounds

Used for: Junction box and other component potting

- Low viscosity for rapid and bubble-free fill
- Fast green strength
- High dielectric strengths, flame resistant
- Primerless adhesion

Encapsulants

Used for: Photovoltaic module lamination

- High transparency, outstanding weather resistance
- Fast cure, high elongation
- Excellent adhesion to metals, polymers and glass
- Custom widths and thicknesses





Bonding Tapes

Used for: Junction box bonding, frame bonding, rail bonding, edge seal and BIPV applications

- Many formulations including acrylic foam tapes, transfer tapes, double-coated tapes, butyl tapes
- Rolls and die-cut shapes
- Instant adhesion, high strength and improved productivity

Single-Coated Tapes

Used for: Cell placement, aesthetics, and module assembly

- Dielectric tapes available in a variety of thicknesses and colors
- Instant adhesion, high strength and improved productivity
- Specialty footpads for non-penetrating racking on membrane roofs

Specialty Sheet and Film Materials

Used for: Module assembly, component assembly and manufacturing process aids

- Frontsheet, backsheet, thin film substrate and non-woven films
- Multiple layer laminations available
- Custom sheet sizes and roll widths

Label Solutions

Used for: Module component and packaging identification

- Printable labels, pre-printed labels, custom labels, scanners and software
- Static dissipative, repositionable and tamper proof labels are available for specialty applications
- A variety of printers available, from handheld to high-performance thermal transfer printers

Thermally Conductive Materials

Used for: Thermal management of solar concentrator systems

- Tapes, adhesives, potting materials, gels, pads and greases
- Optimized adhesion, substrate wetting, bond line thickness and thermal conductivity

Electrically Conductive Materials

Used for: Charge collection and buss bar applications

- Pressure-sensitive adhesive foil tapes
- Printable conductive inks and adhesives
- Solder- and tin-coated conductive ribbons





Soldering Materials and Equipment

Used for: Lead and lead-free photovoltaic interconnect

- Solder paste, pre-forms, cored and non-cored wire solder
- Fluxes, cleaners, masks and thinners
- Solder equipment and fume extraction hoods
- Solder- and tin-coated conductive ribbons

Wire Management

Used for: System assembly and field installation

- UV-resistant cable ties and mounts
- Heat-shrink tubing, wire-marking labels and grounding lugs

Lab and Manufacturing Supplies

Used for: Production and Lab Use

- Microscopes – Binocular and trinocular stereo-zoom microscopes with flat-panel LCD monitors, dual-boom ball-bearing stands, articulating arms, and microscopes and inspection lighting products
- Carts – Universal cart, work-in-process cart, surface mount reel shelves, wire shelves, standard posts & casters and clean room equipment carts
- Desiccating cabinets – Low humidity storage without the use of nitrogen
- Workstations – Stand-alone, single-sided, add-on, electric memory, hard crank adjustable, back-to-back, quad stations, solution series, flow rack components, RTW work tables, and LAN and packaging, and custom workstations
- Hand tools – Tweezers, pliers and cutters, dispensing products, small hand tools, super cutters, super pliers, screwdrivers, nutdrivers, knives, blades, crimping tools, replacement springs, compact handles, and heat sink tools

Clean Room Materials and Supplies

Used for: Safety and Protection in Clean Environments

- Gloves – Latex or nitrile gloves for clean environments; general purpose, chemical resistant, cut resistant, disposable and special purpose with innovative fabrics, protective coatings and comfortable liners
- Tacky mats – General adhesive and high-tack mats, tacky rollers with polyethylene film, and mat frames
- Smocks – Disposable polypropylene lab coats, coveralls, and sleeves
- Bouffant caps – Disposable bouffant caps for general use, heavy-weight bouffant caps, and hair nets





Specialty Services

Custom Packaging Systems

Used to: Package solar modules and components

- Effectively replaces conventional packaging
- Made from durable, lightweight material and designed to reduce shipping and container costs
- Re-usable, recyclable and safe for the environment
- Reduces the use of wood and deforestation
- Reduces shipping-induced damage
- Customized to meet your needs

HEXAPACK®

Custom Converting

Precision Converting, a division of Hisco®, specializes in delivering custom converting capabilities of flexible materials. From tapes and foams to plastics and adhesives, we specialize in rapid prototyping of custom design solutions, die-cutting, slitting, sheeting, laminating, and other specialty converting. We can provide solutions for bonding, insulating, conducting, fastening, protecting, masking, and gasketing.

In addition to providing field service capability, our experience and expertise enable us to provide solutions in thermal management and electronic shielding EMI/RFI. We understand the products, applications, and processes involved in solving your problems as a manufacturer within the solar industry.

- Slitting
- Level Winding
- Laminating and Sheeting
- Rapid Prototyping
- Die-Cutting
- Kiss-Cutting

3M Preferred Converter
Preferred

Custom Adhesive Packaging Services

The adhesives packaging division of Hisco®, also known as Precision Converting, offers unique custom packaging solutions to meet precise specifications. We package adhesives, sealants and resins into economical containers that are easy to store. This custom packaging solution can supply user-friendly dispensing systems that help eliminate waste, increase production yields, save space, and lower costs of every application.

- Packaged Materials
- Custom Urethane Formulation
- Custom Blending
- Custom Pre-Mix, Vacuum & Frozen
- Custom Labels and Screen Print

Vendor Managed Inventory

Hisco® offers a variety of inventory management solutions including VARS, a system designed to replenish stocking levels based on your inventory “max” level or by indicating your desired replenishment amount. Hisco® also offers software solutions and dispensing products that offer more control and accountability for your direct and indirect materials such as tools, safety products and MRO supplies.

Our technology and efficient capabilities allow us to effectively manage your inventory in order to meet your needs. All of our programs can be easily integrated into your back-end process to eliminate duplicate entry.

Quality Products From Trusted Brands



BRANCH OFFICES

ARIZONA

TEMPE

1150 West Geneva Dr.
Tempe, AZ 85282
Phone: (480) 968-6171
Fax: (480) 966-9634

ARKANSAS

LITTLE ROCK

5420 Northshore Dr.
North Little Rock, AR 72118
Phone: (501) 568-3105
Fax: (501) 568-3834

CALIFORNIA

CORONA

2950 Palisades Dr.
Corona, CA 92880
Phone: (714) 777-2661
Fax: (714) 777-2807

SAN DIEGO

12330 Crosthwaite Circle
Poway, CA 92064
Phone: (858) 513-7748
Fax: (858) 513-7757

SAN JOSE

468 Vista Way
Milpitas, CA 95035
Phone: (408) 941-7800
Fax: (408) 941-7805

COLORADO

DENVER

12110 N. Tejon St.
Westminster, CO 80234
Phone: (303) 307-4843
Fax: (303) 307-4609

FLORIDA

TAMPA

700 Brooker Creek Blvd., #1700
Oldsmar, FL 34677
Phone: (813) 749-5942
Fax: (813) 749-5954

GEORGIA

ATLANTA

1650 Horizon Pkwy., Ste 500
Buford, GA 30518
Phone: (770) 271-2917
Fax: (678) 546-4680

ILLINOIS

CHICAGO

1601 Wilkening Rd.
Schaumburg, IL 60173
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Fax: (847) 885-3527

MASSACHUSETTS

BOSTON

157 Grove St., Unit 90
Franklin, MA 02038
Phone: (508) 528-3166
Fax: (508) 528-2170

MINNESOTA

MINNEAPOLIS

13000 Wilfred Ln.
Rogers, MN 55374
Phone: (763) 657-2800
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Fax: (512) 834-8583

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Lewisville, TX 75238
Phone: (972) 360-4000
Fax: (972) 360-4093

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11455 Pellicano Dr.
El Paso, TX 79936
Phone: (915) 598-1127
Fax: (915) 598-3179

HARLINGEN

2721 N. Expressway 77
Harlingen, TX 78552
Phone: (956) 423-1616
Fax: (956) 423-6135

HOUSTON

6650 Concord Park Dr.
Houston, TX 77040
Phone: (713) 934-1600
Fax: (713) 934-1646

SAN ANTONIO

4318 Center Gate Dr.
San Antonio, TX 78217
Phone: (210) 657-4110
Fax: (210) 657-4218

WASHINGTON

SEATTLE

2027 196th St., SW, Ste A-106
Lynnwood, WA 98036
Phone: (425) 582-2262
Fax: (425) 967-5916

CANADA - HiscoCan

TORONTO - ONTARIO

5109 Harvester Rd., Unit B11
Burlington, ON L7L 5Y9
Phone: (905) 633-8185
Fax: (905) 633-8188

CARRIBEAN

PUERTO RICO/ DOMINICAN REPUBLIC

Calle Rosendo Vela Acosta #7
Urb. Industrial Jardines de Carolina
Carolina, PR 00987
Phone: (787) 701-7640
Fax: (787) 701-7643

COSTA RICA

SAN JOSÉ

Inside Costa Rica: 8819-9032
USA: (813) 749-5942

MEXICO

CELAYA

Inside Mexico: (461) 168-2121
USA: (915) 598-1127

CHIHUAHUA

Inside Mexico: (614) 481-8462
USA: (915) 598-1127

GUADALAJARA

Inside Mexico: (333) 818-9500
USA: (915) 598-1127

HERMOSILLO

Inside Mexico: (662) 267-1337
or (631) 104-1476
USA: (520) 988-3107

JUAREZ

Inside Mexico: (656) 616-6214
USA: (915) 598-1127

MEXICALI

Inside Mexico: (686) 582-6105
or (686) 555-8164
USA: (760) 718-3442

MONTERREY

Inside Mexico: (818) 327-9840
USA: (956) 423-1616

NOGALES

Inside Mexico: (631) 104-1475
or (631) 104-1476
USA: (520) 988-3107

REYNOSA

Inside Mexico: (899) 923-4650
USA: (956) 423-1616

TIJUANA

Inside Mexico: (664) 623-6893
USA: (858) 244-6064

CORPORATE & SERVICE LOCATIONS

UNITED STATES

HISCO CORPORATE

6650 Concord Park Dr.
Houston, TX 77040
Phone: (713) 934-1700
Fax: (713) 934-1790

ALL-SPEC

5228 U.S. 421
Wilmington, NC 28401
Phone: (910) 763-8111
Fax: (910) 763-5664

MEXICO - HiscoMex

HiscoMex CORPORATE

Inside Mexico: (656) 616-7026 or (656)-616-2388
USA: (915) 217-2222

ADHESIVE PACKAGING

ADHESIVE MATERIALS GROUP (AMG)

10803 Vinecrest, Ste 190
Houston, TX 77086
Phone: (281) 885-3828
Fax: (281) 885-3829

PRECISION CONVERTING

TEXAS

10803 Vinecrest, Ste 190
Houston, TX 77086
Phone: (713) 983-0141
Fax: (713) 983-8454

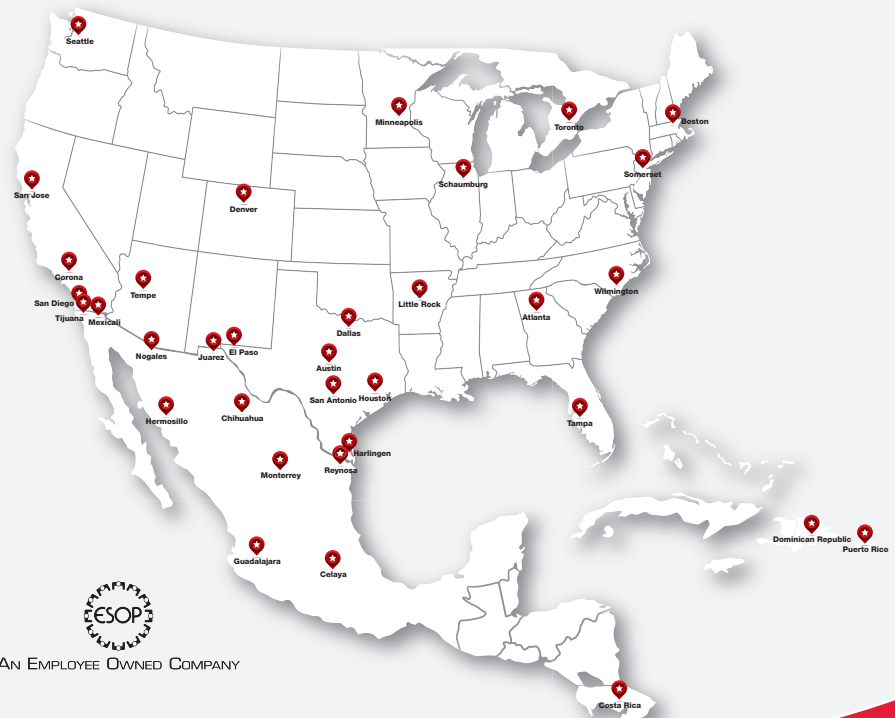
CALIFORNIA

400 E. Parkridge Ave., Ste 101
Corona, CA 92879
Phone: (951) 493-0200
Fax: (951) 493-0201

DISTRIBUTION CENTER

HOUSTON

7807 Bluff Point Dr., Ste 100
Houston, TX 77086
Phone: (281) 885-0072
Fax: (281) 885-0079



AN EMPLOYEE OWNED COMPANY