Advanced Acrylics High Shear Pure Acrylic

Performance That Sticks. Sustainability That Matters.

Our new and patented innovative technologies represent a breakthrough in materials science, delivering exceptional adhesive performance while reducing carbon-footprint.

Revolutionary Innovation in High-Performance Adhesive Technology

Our newly patented Advanced Acrylics technology represents a breakthrough in high-shear adhesive performance, delivering exceptional bond strength and durability while significantly reducing environmental impact. This innovative pure acrylic formulation eliminates solvents as a coating vehicle, addressing the critical industrial demand for sustainable solutions without compromising the superior performance required for demanding specialty labeling and graphical applications.

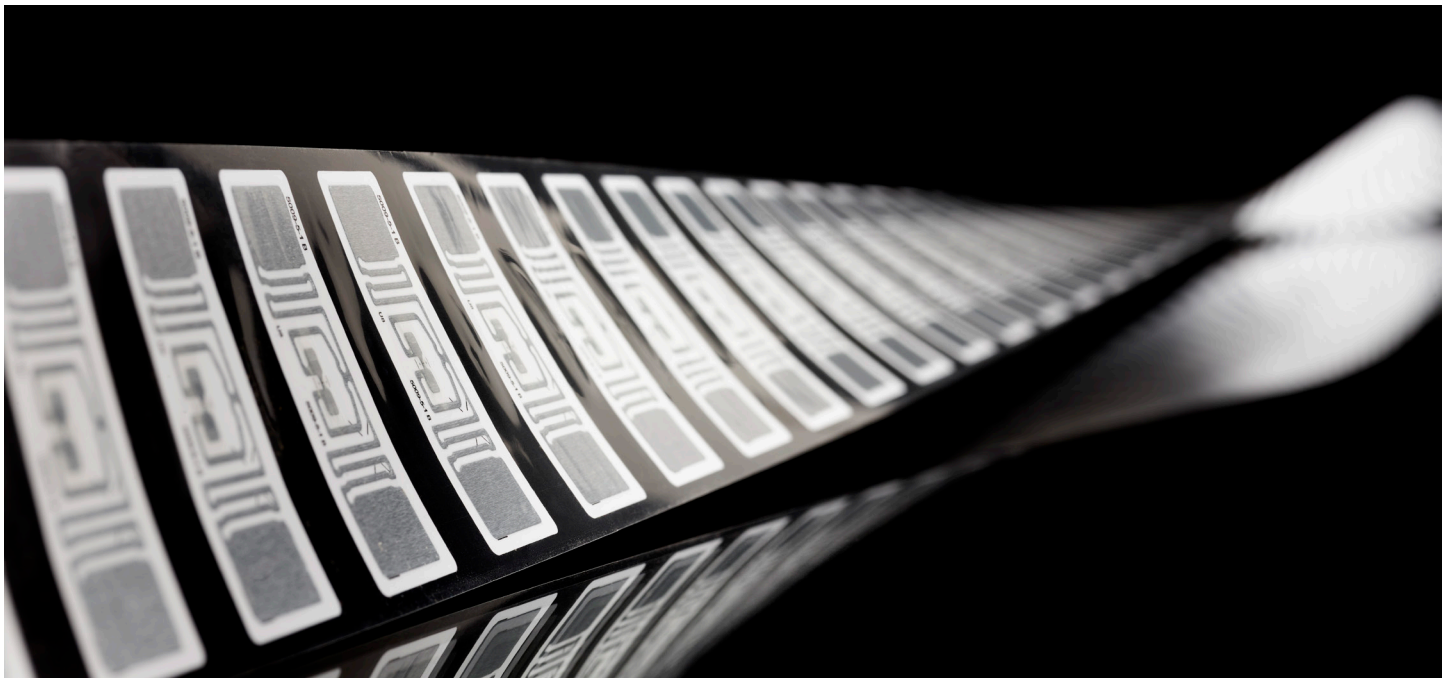
Key Innovation Highlights:

– Advanced pure acrylic chemistry engineered for exceptional shear resistance
– Solvent-free coating process reducing environmental impact during manufacturing
– APEO-free formulation supporting environmental and safety requirements
– Temperature-resistant technology maintaining performance from -40°C to 200°C
– Future-proof solution addressing evolving regulatory requirements

Proven Environmental & Performance Benefits:

Environmental Impact Reduction
– 10-29% lower CO_2 emissions compared to traditional solvent-based acrylics during production and coating processes
– More sustainable production process through elimination of solvents as coating vehicle
– Enhanced recyclability with natural liners containing recycled content
– Low VOC and fogging performance supporting our cleaner manufacturing environments

Superior Performance Characteristics
– Exceptional shear resistance with >10,000 minutes failure time on stainless steel
– Broad temperature performance operational range from -40°C to 200°C
– Excellent chemical resistance to solvents, plasticizers, and UV exposure
– Superior adhesion across diverse substrate materials including polycarbonate and ABS
– Immediate initial tack for precise part placement and positioning
– Outstanding die-cutting characteristics ensuring clean fabrication and processing



Complete Product Portfolio: Seven Precision-Engineered Solutions

Transfer Tape Products

Product	Adhesive Thickness	Liner Construction	Primary Applications
FT 21301	25 microns (1.0 mil)	Glassine, natural liner with recycled content	Security labeling, tax labels, windshield vignettes, backprinted labels
FT 21302	60 microns (2.4 mil)	Glassine, natural liner with recycled content	Plasticized PVC adhesion, graphical displays, banners, backprinted labels, security labeling
FT 21305	125 microns (4.9 mil)	Glassine, natural liner with recycled content	Assembly applications requiring high temperature resistance and low VOC
FT 21902	60 microns (2.4 mil)	Polyethylene protected paper with recycled content	Graphical / Signage applications
FT 21905	125 microns (4.9 mil)	Polyethylene protected paper with recycled content	Graphical / Signage applications

Double Coated Products

Product	Construction	Carrier	Primary Applications
FT 77100	Paper based nonwoven	Tissue nonwoven	Precision assembly and small complex die-cutting or water jet applications
FT 79100	Double coated scrim tape	Polyester scrim	High temperature applications requiring tear resistance

Shared Performance Excellence

All Advanced Acrylics products deliver:
– APEO-free formulation supporting environmental and safety requirements
– Excellent moisture resistance maintaining bond integrity in humid conditions
– Superior conformability to both flat and curved surface applications
– Consistent high-shear performance across varied environmental conditions
– Natural liners with recycled content supporting sustainability initiatives
– Pure acrylic adhesive system for reliable chemical and UV resistance

Advanced Construction Features

Transfer Tape Products (FT 21301, 21302, 21305, 21902, 21905):
– Single adhesive layer for precision bonding applications
– Available with glassine or polyethylene protected paper liners
– Optimized for clean die-cutting and precise application

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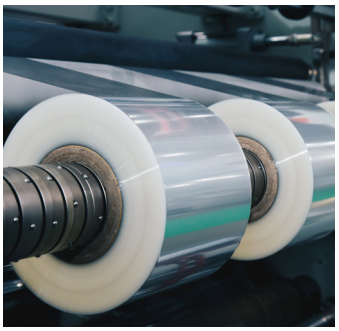
Double Coated Products (FT 77100, FT 79100):
– FT 77100: Tissue nonwoven carrier for maximum conformability in precision assembly
– FT 79100: Polyester scrim carrier providing enhanced tear resistance for demanding applications
– Dual adhesive layers for versatile substrate bonding



Technical Performance Specifications

Adhesion Performance Comparison - Transfer Tapes

Substrate	FT 21301	FT 21302	FT 21305	FT 21902	FT 21905
Stainless Steel (24hr)	440 N/m	492 N/m	712 N/m	500 N/m	672 N/m
Polycarbonate (24hr)	460 N/m	548 N/m	920 N/m	552 N/m	892 N/m
Polypropylene (24hr)	164 N/m	216 N/m	284 N/m	208 N/m	744 N/m
ABS (24hr)	—	—	—	516 N/m	—

Adhesion Performance - Double Coated Products

Substrate	FT 77100	FT 79100
Stainless Steel (24hr)	712 N/m	—
Polycarbonate (24hr)	920 N/m	—
Polycarbonate (24hr)	284 N/m	—

Note: FT 77100 and FT 79100 share similar adhesive performance characteristics with FT 21305 due to comparable adhesive thickness and formulation.

Temperature & Environmental Performance

- Application Temperature Range: 10°C to ambient
- Service Temperature Range: -40°C to 200°C
- Shear Resistance: >10,000 minutes at room temperature (1000g load)
- Storage Stability: 2 years at 18-22°C, 30-70% RH
- Chemical Resistance: Excellent resistance to solvents, chemicals, plasticizers, and UV light

Primary Applications & Industry Solutions

Specialty Labeling Applications
Industry Challenge Analysis: High-performance labeling applications require exceptional durability, chemical resistance, and long-term adhesion performance while meeting increasingly stringent environmental compliance requirements. Traditional solvent-based solutions create regulatory complexity, supply chain volatility, and environmental concerns.

Our Technical Solution Portfolio:
- FT 21301: Low coatweight precision for security labeling, tax labels, windshield vignettes, and backprinted labels
- FT 21302: Versatile performance for plasticized PVC adhesion, graphical displays, banners, backprinted labels, and security labeling
- FT 21305: High-temperature assembly applications requiring superior temperature resistance and low VOC performance

Performance Validation: Security labeling and graphical display applications require reliable adhesion performance combined with long-term environmental resistance. Our Advanced Acrylics maintain consistent adhesion performance across temperature variations from -40°C to 200°C while providing the chemical resistance necessary for harsh environmental exposure, all while reducing the CO_2 footprint of the adhesive application by 10-29%.

Graphical & Signage Applications
Industry Challenge Analysis: Commercial signage and architectural graphics demand exceptional weather resistance, UV stability, and long-term adhesion performance. Critical requirements include resistance to temperature cycling, moisture exposure, chemical cleaning agents, and UV degradation while supporting corporate sustainability initiatives.

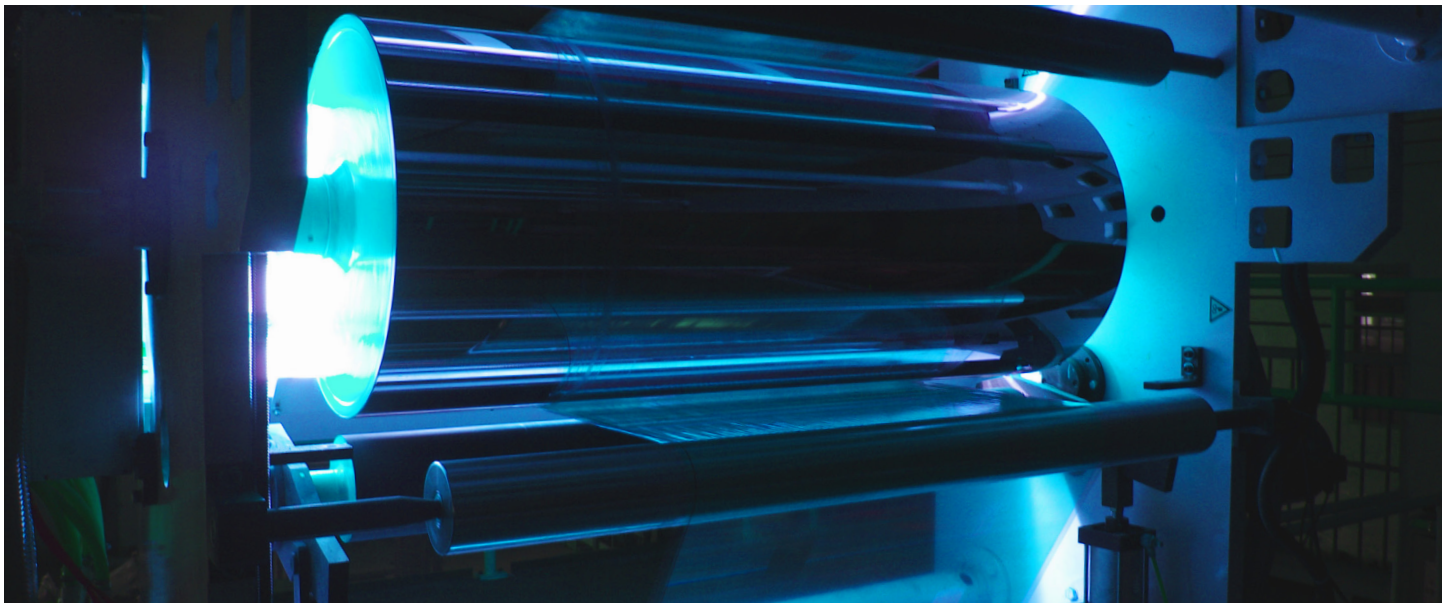
Our Comprehensive Graphical & Signage Solution: Technical Performance Specifications:
- FT 21902: 60-micron adhesive thickness with polyethylene protected paper liner for graphical applications
- FT 21905: 125-micron adhesive thickness with polyethylene protected paper liner for maximum durability in signage applications
- Superior Temperature Resistance: -40°C to 200°C operational capability ensuring performance across demanding environmental conditions
- Low VOC Performance: Supporting cleaner manufacturing environments and regulatory compliance

Commercial Signage Case Study: Architectural graphics installations require consistent performance through extreme weather conditions, temperature fluctuations, and intense UV exposure over multi-year service life. Our Advanced Acrylics technology maintains structural integrity and adhesion performance throughout extended outdoor exposure while reducing the CO_2 footprint of the adhesive production and coating processes by up to 29%, supporting both performance requirements and corporate sustainability objectives.

Assembly Applications
Industry Challenge Analysis: Industrial assembly operations demand adhesives that deliver reliable performance in high-temperature environments while supporting sustainability initiatives and regulatory compliance requirements. Complex assembly applications often require enhanced conformability or tear resistance to accommodate varied substrate geometries and stress conditions.

Our Comprehensive Assembly Solution: Technical Performance Specifications:
- FT 21305: 125-micron transfer tape for high-temperature assembly applications requiring precision bonding
- FT 77100: Double coated nonwoven with tissue carrier for precision assembly and complex die-cutting applications requiring maximum conformability
- FT 79100: Double coated scrim tape with polyester scrim carrier for high-temperature applications requiring enhanced tear resistance
- Superior Temperature Resistance: -40°C to 200°C operational capability ensuring performance across demanding environmental conditions
- Low VOC Performance: Supporting our cleaner manufacturing environments and regulatory compliance

Industrial Assembly Case Study: Manufacturing operations requiring high-temperature resistant bonding and precision assembly face challenges with traditional adhesives that compromise performance or create environmental concerns. Our Advanced Acrylics technology maintains structural integrity and adhesion performance throughout demanding temperature exposure while providing the conformability (FT 77100) or tear resistance (FT 79100) needed for specific assembly requirements. The solvent-free coating process reduces the CO_2 footprint of the adhesive production and coating processes by up to 29%, supporting both operational requirements and corporate sustainability objectives.



Application Spotlight: Superior Substrate Performance

Polycarbonate Excellence
Technical Superiority: Our Advanced Acrylics technology demonstrates exceptional performance on polycarbonate substrates, a critical requirement for automotive, electronics, and signage applications where clarity and durability are essential.

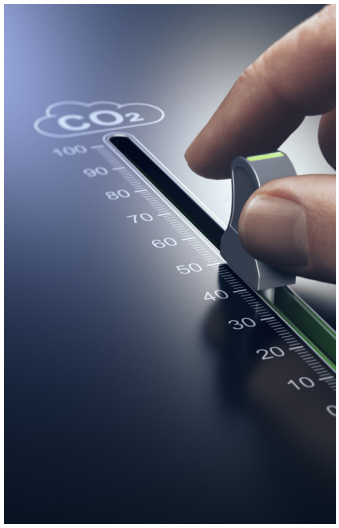
Performance Data:
– FT 21305: 920 N/m adhesion to polycarbonate
– FT 77100: 920 N/m adhesion to polycarbonate for precision assembly applications
– FT 21905: 892 N/m adhesion to polycarbonate for signage applications
– Consistent Performance: Reliable adhesion across the complete product range

ABS Substrate Compatibility
Engineering Advantage: Advanced Acrylics technology provides reliable bonding to ABS (Acrylonitrile Butadiene Styrene) substrates commonly used in automotive interior components, electronics housings, and consumer products.

Validated Performance:
– FT 21902: 516 N/m adhesion to ABS substrates
– Temperature Stability: Maintains performance across -40°C to 200°C range
– Chemical Resistance: Superior resistance to plasticizers and automotive fluids

Precision Assembly Applications
Double Coated Advantage: Our double coated products (FT 77100 and FT 79100) provide specialized solutions for demanding assembly applications requiring enhanced performance characteristics.

Construction Benefits:
– FT 77100: Tissue nonwoven carrier provides maximum conformability for complex geometries and water jet cutting applications
– FT 79100: Polyester scrim carrier delivers enhanced tear resistance for high-stress assembly applications requiring dimensional stability



Comprehensive Sustainability Benefits

Measurable Environmental Impact
Our Advanced Acrylics technology delivers quantifiable environmental advantages that support corporate sustainability initiatives and regulatory compliance requirements.

Our Production & Manufacturing Benefits:
– 10-29% reduction in carbon dioxide emissions during production and coating processes
– Elimination of solvents as coating vehicle reducing our manufacturing complexity and environmental impact
– PEO-free formulation eliminating alkylphenol ethoxylates from the manufacturing process

Strategic Business Advantages
– Improved supply chain stability through elimination of future solvent cost volatility
– Enhanced regulatory compliance positioning ahead of environmental regulations
– Future-proof technology investment protecting against regulatory changes
– Enhanced corporate sustainability credentials supporting ESG objectives
– Low VOC performance supporting our cleaner manufacturing environments

Complete Technology Portfolio

The Advanced Acrylics High Shear Pure Acrylic products represent one component of our comprehensive newly patented adhesive portfolio, designed to address diverse industrial application requirements across multiple market segments.

Additional Portfolio Solutions
Removable Solvent-free UV Acrylic: Easier removability for temporary applications including glazing protection and paper core tabbing, combining sustainability with precision removability performance.

LSE Solvent-free UV Acrylic High Repulsion: Superior resistance to substrate repulsion forces for challenging applications including steering wheel hands-on detection and textured surface bonding.

Expert Partnership & Comprehensive Support

Beyond providing advanced adhesive solutions, we deliver comprehensive partnership support to ensure successful implementation and optimal performance across your specific applications.

Technical Expertise & Support Services
Application Engineering Specialists: Our team provides deep technical expertise in high-shear adhesive applications, working directly with your technical teams to optimize performance parameters for demanding specialty labeling and graphical applications.

Substrate Compatibility Assessment: Comprehensive evaluation of your specific substrate materials including polycarbonate, ABS, and specialty plastics, with customized testing protocols for performance validation.

Implementation & Transition Support: Comprehensive guidance throughout the transition process from traditional solvent-based systems, including process optimization, quality validation protocols, and performance benchmarking.

Ongoing Technical Partnership: Continuous collaboration to refine performance parameters, develop application-specific solutions, and provide ongoing optimization support as requirements evolve.

Implementation & Next Steps

Getting Started with Advanced Acrylics Technology
Technical Documentation & Specifications: Request comprehensive technical data sheets, performance specifications, and substrate compatibility guidance tailored to your specific specialty labeling or graphical application requirements.

Sample Testing & Evaluation: Order product samples for in-house testing and evaluation, including substrate-specific testing protocols and long-term performance validation procedures designed for your operational environment.

Application Assessment & Consultation: Schedule detailed consultations with our application specialists to review specific requirements, evaluate substrate compatibility, and develop optimized implementation strategies.

Implementation Planning & Support: Comprehensive planning including transition timelines, process optimization recommendations, and ongoing technical support to ensure successful integration into your specialty labeling or graphical operations.

Contact Information & Support

For samples, detailed technical specifications, substrate compatibility assessment, or technical consultations regarding our Advanced Acrylics technology, contact your local technical representative or visit our comprehensive online resource center.

Immediate Support Available:
– Technical data sheet requests and performance specifications:
  - FT 21301
  - FT 21302
  - FT 21305
  - FT 21902
  - FT 21905
  - FT 77100
  - FT 79100
– Sample ordering and substrate-specific evaluation support: Contact Us Form
– Application consultation and engineering support for specialty labeling and graphical applications: THT Phone Number
– Implementation planning and transition guidance: Technology Transition Guide

Performance That Sticks. Sustainability That Matters.

“Leading the future of sustainable adhesive technology through innovation, performance,

Our technical experts are here to show you how to work with your materials successfully during every phase of your application. You can count on us to approach any challenge with genuine curiosity and care.

Contact your Avery Dennison sales representative or visit tapes.averydennison.com

Asia Pacific

Kunshan, China,
No. 618 Nanhe Road
Kunshan Economic &
Technological Zone
China 215335
Phone: +86 400 6987 555
Fax: +86 512 57155059

Europe

Tieblokkenlaan 1
B-2300 Turnhout
Belgium
Phone: +32 (0)14 40 48 11
Fax: +32 (0)14 40 48 55

North America

250 Chester Street
Painesville, Ohio
44077 USA
Phone: +1 866-462-8379
Fax: +1 888-358-4469

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