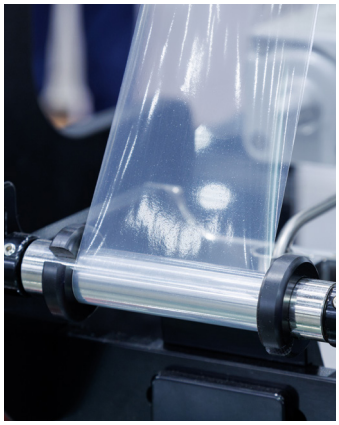
LSE Solvent-Free UV Acrylic High Repulsion

Our new and patented innovative technologies represent a breakthrough in materials science, delivering exceptional adhesive performance with best-in-class low VOC levels, while reducing carbon-footprint.

Performance That Sticks. Sustainability That Matters.



Revolutionary Innovation in Repulsion Resistant Adhesive Technology

Our newly patented LSE Solvent-free UV Acrylic technology with high repulsion resistance represents a groundbreaking advancement in materials science, delivering exceptional adhesion to challenging substrates while significantly reducing environmental impact. This innovative 100% polymer formulation addresses the critical industrial demand for reliable bonding to low surface energy materials and textured surfaces without compromising performance or sustainability.

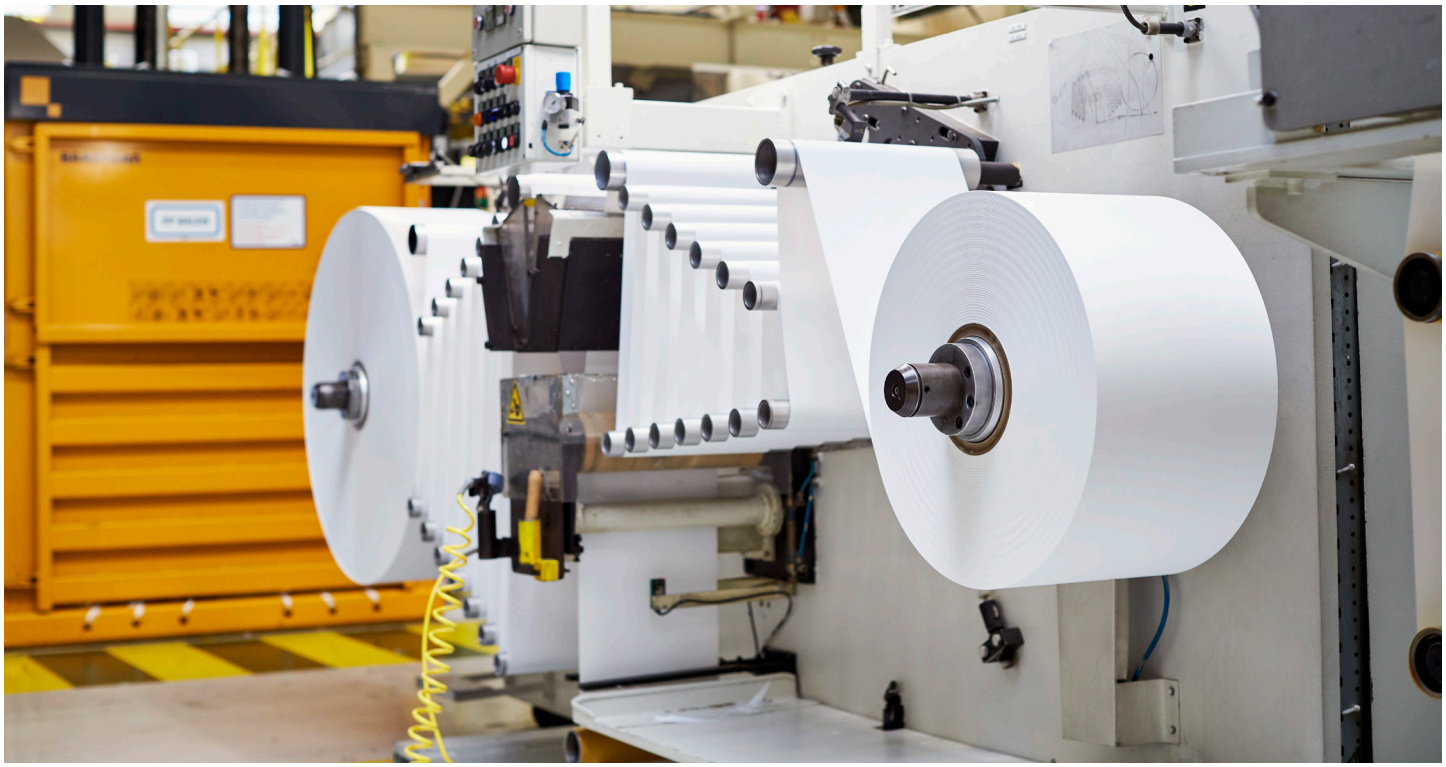
Key Innovation Highlights:
– 100% polymer formulation with no solvents used in manufacturing or coating process
– Superior repulsion resistance engineered for challenging substrate applications
– Low VOC levels compared to solvent-based acrylic adhesives
– Future-proof solution addressing evolving regulatory and sustainability requirements

Proven Environmental & Performance Benefits

Environmental Impact Reduction
– 19-30% lower CO_2 emissions compared to traditional solvent-based acrylics during production and coating processes
– 50% less water needed to produce and coat the adhesive (vs. solvent-based acrylic adhesives)
– Zero solvent emissions in our manufacturing and coating operations
– Enhanced sustainability profile supporting corporate environmental initiatives

Superior Performance Characteristics
– Exceptional repulsion resistance maintaining bond integrity on challenging substrates
– Strong initial tack for immediate positioning and secure placement
– Superior adhesion to low surface energy substrates including textured plastics
– Excellent UV resistance maintaining performance integrity through extended exposure
– Outstanding dimensional stress tolerance accommodating substrate movement
– Reliable temperature performance across varied environmental conditions

Strategic Business Advantages
– Improved supply chain flexibility with reduced dependency on volatile raw material markets
– Enhanced regulatory positioning ahead of evolving environmental regulations
– Reduced compliance complexity for environmental documentation
– Future-proof technology investment protecting against regulatory changes
– Enhanced corporate sustainability reporting supporting ESG objectives



Technical Specifications & Construction: FT 77400 & FT 21502

Product Portfolio Overview

Product	Construction	Primary Applications	Key Advantage
FT 77400	Paper based nonwoven	Foam bonding, textured surfaces	Maximum conformability
FT 21502	Transfer Tape	Component mounting, assembly	Precision application

Innovative Construction Features
100% Polymer Adhesive System:
– No solvents used in manufacturing or coating process
– UV light curing eliminates emissions during application
– Engineered specifically for repulsion-resistant performance
– Optimized for low surface energy substrate adhesion

Advanced Carrier Technology:
– Double coated nonwoven construction (FT 77400) for maximum conformability
– Transfer tape construction (FT 21502) for precision applications
– Engineered for dimensional stress accommodation
– Superior die-cutting characteristics for complex shapes

Primary Applications & Industry Solutions

Automotive: Steering Wheel Hands-off Detection Systems
Industry Challenge Analysis: Modern automotive safety systems require reliable sensor mounting on textured steering wheel surfaces that experience constant handling, temperature variations, and dimensional stress. Traditional adhesives fail due to repulsion forces from textured substrates and LSE materials commonly used in automotive interiors.

Our Technical Solution:
– Superior repulsion resistance maintaining bond integrity despite substrate stress
– Strong initial tack ensuring immediate sensor positioning accuracy
– Temperature stability performing consistently across automotive operating ranges
– Dimensional stress tolerance accommodating steering wheel flexing and movement

Automotive Implementation Case Study: Hands-off detection sensors require permanent, reliable mounting on textured steering wheel surfaces manufactured from low surface energy materials. Our LSE Solvent-free UV Acrylic technology provides the repulsion resistance necessary to maintain sensor positioning through constant handling and temperature cycling, while reducing the carbon footprint of the adhesive application by 19-30%, supporting automotive OEM sustainability initiatives.

Industrial: Textured Surface and Foam Bonding Applications
Industry Challenge Analysis: Industrial applications frequently require bonding to challenging substrates including textured plastics, foams, and materials with inherent repulsion characteristics. These applications demand adhesives that maintain bond integrity despite substrate movement, dimensional stress, and environmental exposure.

Our Technical Solution:
– Enhanced surface wetting on low surface energy substrates
– Dimensional stress accommodation maintaining bond integrity during substrate movement
– Superior conformability to irregular and textured surface profiles
– Reliable long-term performance through environmental exposure cycles

Industrial Foam Bonding Case Study: Manufacturing operations requiring permanent foam attachment to textured plastic substrates face challenges with traditional adhesives that fail due to repulsion forces and dimensional stress. Our High Repulsion Resistance technology provides reliable bonding performance while eliminating solvent-related environmental concerns, supporting both operational requirements and sustainability objectives in industrial manufacturing environments.

Application Spotlight: Advanced Substrate Challenges

Low Surface Energy Materials Expertise
Technical Superiority: Our LSE Solvent-free UV Acrylic technology specifically addresses the fundamental challenge of bonding to low surface energy substrates that naturally resist adhesion. Through advanced polymer chemistry and UV curing technology, we achieve reliable bonding while reducing carbon-footprint.

Substrate Performance:
– Textured plastics including automotive interior materials
– Foam materials with varying density and surface characteristics
– LSE substrates requiring specialized adhesion chemistry
– Dimensional stress applications where substrate movement occurs

Repulsion Resistance Technology
Engineering Advantage: Unlike conventional adhesives that rely on surface preparation or primers, our High Repulsion Resistance technology is engineered at the molecular level to overcome natural substrate repulsion forces while maintaining environmental sustainability.

Performance Validation:
– Immediate initial tack for precise component positioning
– Long-term bond integrity through environmental stress cycles
– Reliable performance on substrates that challenge conventional adhesives
– Consistent results across varied application conditions

Complete Technology Portfolio

The LSE Solvent-free UV Acrylic High Repulsion Resistance products represent one technology of our comprehensive newly patented adhesive portfolio, designed to address diverse industrial application requirements across multiple market segments.

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

Advanced Acrylics - High Shear Pure Acrylic: Exceptional shear resistance technology for high-stress applications including specialty labeling and graphical applications requiring extended durability.

Expert Partnership and Comprehensive Support

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

Technical Expertise & Support Services
Application Engineering Specialists: Our team provides deep expertise in low surface energy substrate bonding, working directly with your technical teams to optimize performance parameters for challenging material combinations.

Substrate Compatibility Assessment: Comprehensive evaluation of your specific substrate materials and application requirements, including testing protocols for repulsion resistance validation.

Implementation and Transition Support: Detailed guidance throughout the transition from traditional adhesive systems, including process optimization and performance benchmarking for challenging applications.

Ongoing Technical Partnership: Continuous collaboration to address evolving substrate challenges, develop application-specific solutions, and provide advanced troubleshooting support.

Implementation and Next Steps

Getting Started with LSE Solvent-free UV Acrylic Technology
Technical Documentation & Specifications: Request comprehensive technical data sheets, repulsion resistance specifications, and substrate compatibility guidance tailored to your challenging application requirements.

Sample Testing & Evaluation: Order product samples for substrate-specific testing and evaluation, including repulsion resistance testing protocols and long-term performance validation.

Substrate Compatibility Assessment: Schedule detailed technical consultations to evaluate your specific substrate materials and develop optimized bonding strategies.

Implementation Planning & Support: Comprehensive planning including UV curing process integration, application optimization, and ongoing technical support for challenging substrate applications.

Contact Information & Support

For samples, detailed technical specifications, substrate compatibility assessment, or technical consultations regarding our LSE Solvent-free UV Acrylic High Repulsion Resistance technology, contact your local technical representative or visit our comprehensive online resource center.

Immediate Support Available:
– Technical data sheet requests and repulsion resistance specifications:
  • FT 77400
  • FT 21502
– 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, and environmental responsibility."

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

#MakingPossible

AVERY DENNISON

MAKING POSSIBLE™