



Strong, Safe, Reliable

SMART SOLUTIONS FOR RAILWAY VEHICLES



Adhesive Options

PRODUCTS AND APPLICATIONS



What are **LIQUID ADHESIVES?**

Bostik produces a wide range of liquid adhesives. Solvent based, fire retardant liquid systems are used to produce thermal and acoustical insulation bag film, decorative laminates and varying other rail applications.

L4145

One part nitrile rubber and solvent based adhesive, fast drying, has a high viscosity, used in various upholstery applications, bonds a wide range of fibrous, porous and non-porous materials including aluminum, ABS, vinyl films and foams, urethanes, nitriles, natural and synthetic fabrics.

LADH7590

LADH7590 is a solvent based liquid adhesive chosen by tier manufacturers to give their components a peel and stick feature for easy interior assembly and installation.



What are **SILYL MODIFIED POLYMER (SMP) ADHESIVES?**

SMP adhesives are easy to use and environmentally friendly. They have a wide range of applications. SMP is primerless on most substrates. Excellent UV resistance, easy workability, sandable, paintable and moisture resistant make SMP adhesives a smart choice.

70-01A

70-01 is an excellent sealant specially developed for sealing in railway vehicles. Its low viscosity makes it easy to apply and tool.

70-03A | Dual, Slow Skin (SKF)

70-03A is a high performance adhesive for bonding interior and exterior components of rail vehicles. This product is available in standard, slow skin and dual formulations. The slow skin formula allows for precision placement of substrates before fully curing. The dual formula speeds set time and cures independent of humidity. All formulations are easily extrudable and feature easy tooling.

70-03A FR

70-03A FR is a high performing fire retardant adhesive for bonding interior and exterior components of rail vehicles. It offers the adhesive strength of the standard 70-03A with added fire retardant properties. Meets and exceeds NFPA 103 standard for smoke, flame and toxicity.

70-08A | Dual, Slow Skin (SKF)

The 70-08A is a high green strength adhesive designed for glass bonding to various substrates, and available in dual and slow skin formulations. The initial tack holds substrates in place, therefore increasing manufacturing speed. Because this product is primerless on most substrates, 70-08A is a safer choice for manufacturers.



What are **PRESSURE SENSITIVE (PSA) ADHESIVES?**

Commonly known as a PSA, pressure sensitive adhesives offer a wide range of adhesion on many different substrates. From permanent bonds to removable adhesion, PSAs are a great choice for bonding panels, fabrics, foam and other interior products.

F14-554 | FR

Fire retardant acrylic film with excellent peel and shear properties. Primarily used for the retrofitting of railcar decorative laminates.

F14-588 | FR

Fire retardant acrylic film adhesive, bonds flexible PVF and vinyl materials, excellent resistance to humidity and elevated temperatures.

F14-610

The Bostik 610 film exhibits excellent room temperature tack coupled with good high and low temperature performance. Designed for bonding placards, signage and decorative trim in the railway industry.



What are **WEB ADHESIVES?**

Bostik web adhesives are a heat activated, thin, fabric-like material that vary in weight between 12 - 100 grams per square yard. These products offer superior usage control to manufacturers, reducing waste from typical spray and film applications.

PE103

PE103 is a hot-melt polyester adhesive, with low activation temperature, excellent adhesion to textiles, vinyl and urethane foams and resists laundering.

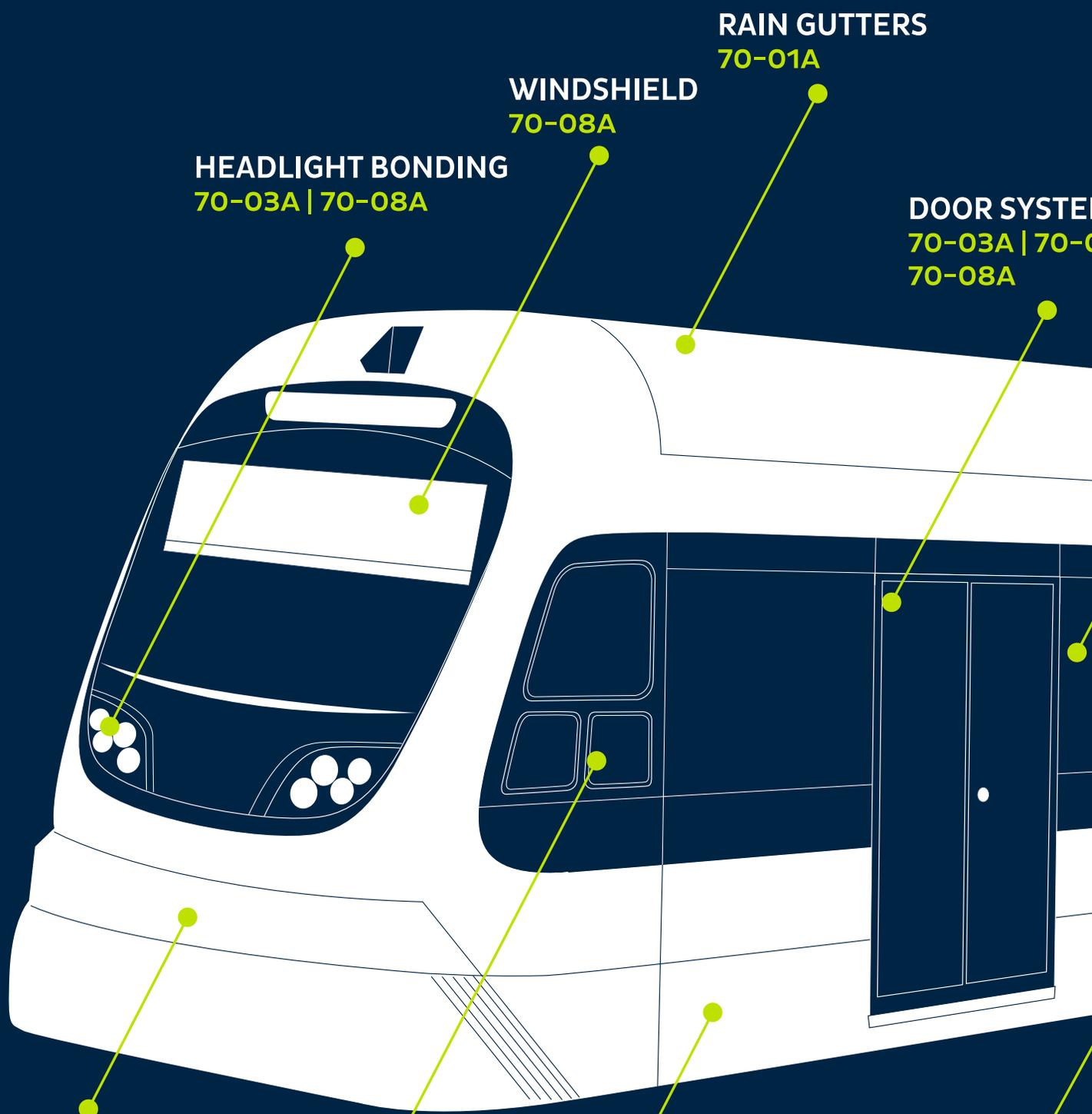
PA145

PA145 is a hot-melt web adhesive that is based on a high performance polyamide polymer. It has excellent adhesion to textiles, vinyl and urethane foams and resists laundering.

SPA110FR-A

SPA110FR-A is a hot-melt web adhesive that is based on polyamide. It bonds to urethane foams and plasterized vinyl. SPA110FR-A is formulated to aid in fire retardant constructions and has excellent resistance to plasticizer migration and laundering.





RAIN GUTTERS
70-01A

WINDSHIELD
70-08A

HEADLIGHT BONDING
70-03A | 70-08A

DOOR SYSTEM
70-03A | 70-08A
70-08A

COCKPIT
70-01A | 70-03A

BODY COMPONENTS
70-01A

WINDOW ASSEMBLIES
70-08A

**FLOOR BONDING
& INSULATION**
70-01A | 70-03A
70-03A FR

**THERMAL &
ACOUSTICAL INSULATION**

F14-554 | F14-588
F14-610 | 70-03A FR
L4145 | LADH7590

SEATING & UPHOLSTERY

PE103 | PA145 | SPA110FR-A
L4145 | LADH7590

INTERIOR ACCESSORIES

70-03A | 70-03A FR
F14-610 | F14-554 | F14-588
L4145 | LADH7590

SIGNAGE

F14-554 | F14-588
F14-610 | 70-03A FR

INTERIOR PANELING

70-03A | 70-03A FR
70-08A

LIGHTING

F14-554 | F14-588
F14-610 | 70-03A FR

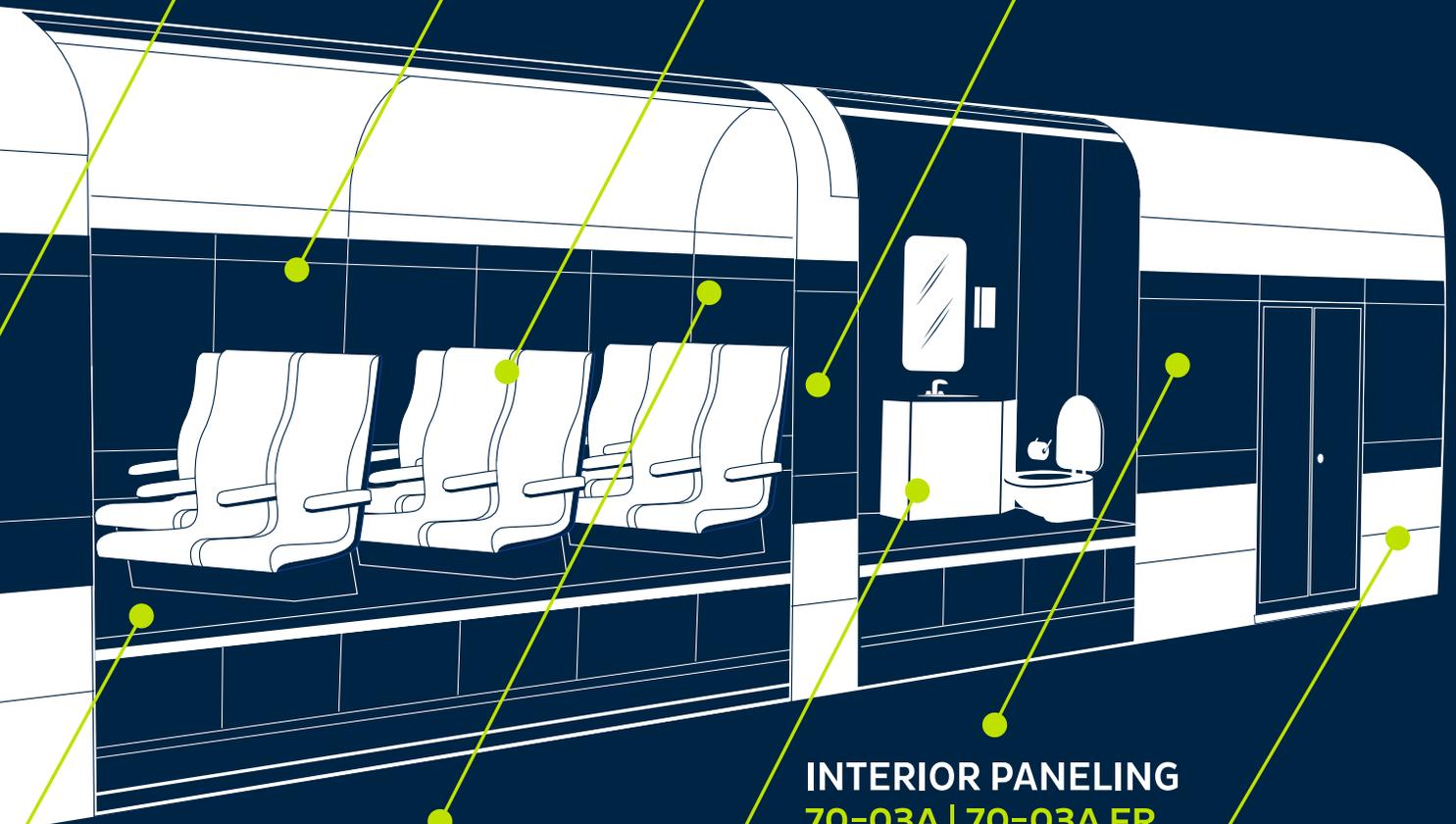
**MOISTURE INSULATION
& GENERAL SEALING**

70-01A | 70-03A

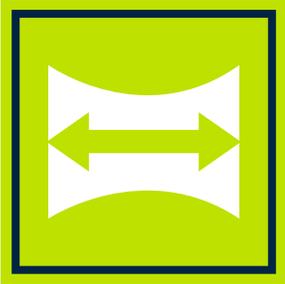
**BATHROOM, GALLEY
KITCHEN, BED**

70-01A | 70-03A
70-03A FR | 70-08A
PE103 | PA145 | SPA110FR-A
L4145 | LADH7590

MS
03A FR



Technology



What is **ELASTIC BONDING?**

Elastic bonding adhesives provide a flexible joint or seal that bonds individual components to a structural frame, giving it a dynamic attachment which allows expansion and contraction while maintaining bond integrity. Elastic bonds are extremely durable, making them ideal for applications where a higher-temperature structural bond would break under continuous movement and stress.



What is **FIRE RETARDANCY?**

Fire retardant adhesives inhibit the spread of flame. They aid occupant safety by reducing fire, smoke and toxic fumes, allowing railcar passengers a greater span of time to exit a high-danger situation.



What is **PRESSURE SENSITIVE ADHESION?**

Commonly known as a PSA, pressure sensitive adhesives offer a wide range of adhesion on many different substrates. From permanent bonds to removable adhesion, PSAs are a great choice for bonding panels, fabrics, foam and other interior products.



What are **LIGHTWEIGHT SOLUTIONS?**

Lightweight solutions from Bostik are essential for modern construction methods. Reducing weight in transportation vehicles translates into fuel savings and a lower overall impact on the environment. Bostik adhesives offer lightweight solutions specifically formulated to decrease weight yet provide strong, lasting bonds that keep transportation moving.

SMP Elastic Bonding vs. Mechanical Fasteners

LIGHTWEIGHT

Elastic bonding weighs less than mechanical fasteners such as nuts and bolts and provides a lighter bond. This allows for the use of lighter weight composite materials and a more fuel efficient on-rail performance. Challenges with the use of mechanical fasteners on composites are eliminated with the use of elastic bonding.

MATERIAL PRESERVATION

Elastic bonding preserves the integrity of flooring materials such as fiberglass composite, phenolic composite, polycarbonate, polymeric material, carbon fiber, etc. Mechanical fasteners require drilling and risk irreparable damage. Elastic bonding reduces overall waste potential in the production process.

VIBRATION

Bostik SMP products provide inherent vibration dampening and sound deadening properties, while manufacturers of mechanical fasteners are forced to insert additional layers of padding and insulation to reduce vibration and sound noise.

EFFICIENCY

Elastic bonding eliminates the need for multiple sizes and strengths of mechanical fasteners, thus reducing the complexity of the assembly process.

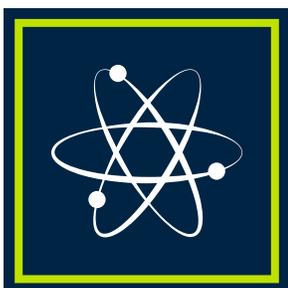
SIMPLICITY

Welding or fastening techniques require more specialized processes and require high paid application specialists. Elastic bonding requires less specialized processes and covers several applications. This also expands options for robotic manufacturing.

SAFETY

The nature of elastic bonding maintains the originally designed operating performance of substrates over the life of the vehicle, improving long term safety. Mechanical fasteners, due to vibration and movement, can degrade substrates causing a shortened lifespan.

Smart Solutions



FOR THE LONG HAUL

As railway transportation expands, regulatory changes will affect safety standards. Bostik is committed to researching existing and upcoming regulatory changes regarding railcar safety. Our team of specialists engineer adhesives to stay ahead of these changes. Many Bostik products already meet or exceed European and North American safety standards for smoke, flame and toxicity. Bostik smart adhesives stand for safe, strong and reliable railway vehicle bonds for today, and years to come.



Smart help:
1-800-726-7845

Bostik, Inc.
11320 W Watertown Plank Road, Wauwatosa, WI 53226, USA
800-7-BOSTIK
www.bostik-us.com
www.bostik-rail.com