



Film adhesives

Bostik's film adhesives are designed to perform at the highest level in their application areas. Bostik manufactures thermoplastic, thermoset and pressure sensitive adhesives. These adhesives can be provided with sophisticated fire retardant packages to meet the most demanding aircraft and industrial requirements. Bostik provides these films on a variety of substrates, release liners and in a variety of colors. Bostik flame-retardant film adhesives are used to create decorative laminates for aircraft interiors. One- and two-part liquid adhesive systems are used as primers and attachment aids throughout the aircraft. Bostik also supplies fire-retardant heat seal coatings for use in thermal acoustical insulation.

AEROSPACE



THERMOSET FLAME RETARDANT EMBOSSING FILMS

Bostik offers a wide variety of thermoset embossing flame retardant films to the aerospace industry for the purpose of texture retention in decorative laminates used for aircraft wall coverings made from Tedlar® (PVF) film. The embossing films are used in composites that must meet FAR 25.835 (d) part IV:OSU heat resistance and part V:NBS smoke density. These embossing films have excellent adhesion to Tedlar and vinyl films and offer excellent solvent and heat resistance in the cured state.

Product	Chemical description	Application temperature for bonding	Suggested curing conditions	Adhesive wt. g/m ² (0.076 mm / 3 mil film)	Principle Characteristics
669	Phenoxy Urethane	120°C - 135°C 250°F - 275°F	10 minutes at 160°C, 6,9 bar 10 minutes at 320°F, 100 psi	132	Cured film exhibits excellent solvent and heat resistance
676	Phenoxy Urethane	120°C - 135°C 250°F - 275°F	10 minutes at 160°C, 6,9 bar 10 minutes at 320°F, 100 psi	44	Clear film
689	Phenoxy Urethane	120°C - 135°C 250°F - 275°F	10 minutes at 160°C, 6,9 bar 10 minutes at 320°F, 100 psi	125	Improved FR system
700	Phenoxy Urethane	120°C - 135°C 250°F - 275°F	Seconds at 175°C Seconds at 347°F	125	Fast curing. Used for continuous emboss applications
720	Phenoxy Urethane	120°C - 135°C 250°F - 275°F	10 minutes at 160°C, 6,9 bar 10 minutes at 320°F, 100 psi	110	Harder and less flexible film than 669
767	Phenoxy Urethane	120°C - 135°C 250°F - 275°F	10 minutes at 160°C, 6,9 bar 10 minutes at 320°F, 100 psi	87	Contains to halogens

NON-FLAME RETARDANT THERMOSET FILM ADHESIVES

Product	Chemical description	Application temperature for bonding	Suggested curing conditions	Adhesive wt. g/m ² (0.076 mm / 3 mil film)	Principle Characteristics
250	Nitrile Phenolic	105°C - 120°C 225°F - 275°F	3-10 minutes at 180°C / 360°F	79	Excellent heat and oil resistance
300, 301	Polyester	110°C - 120°C 230°F - 250°F	5 minutes at 170°C / 340°F	94	Launderable, very flexible
311	Polyester	90°C - 120°C 200°F - 250°F	2 minutes at 160°C / 325°F	93	Launderable, tough, flexible film
312	Polyester	90°C - 120°C 200°F - 250°F	2 minutes at 160°C / 325°F	93	Launderable, tough, film
314	Polyester	90°C - 120°C 200°F - 250°F	< 1 minute at 175°C / 350°F	93	Launderable, highly cross-linked film

FLAME RETARDANT PRESSURE SENSITIVE ADHESIVE FILMS

Bostik offers a variety of flame retardant pressure sensitive adhesive films used primarily for the retrofitting of aircraft decorative laminates. Each of these films may be used where compliance with FAR 25.853 is needed. These films have an excellent balance of shear and peel properties.

Adhesive	Typical peel strength		Adhesive wt. g/m ² (0.076 mm / 3 mil film)	Principle Characteristics
	Lbs/in	N/in		
552	7.0	34.9	94	Contains no bromine. Very high peel and shear
554	6.6	30	91	Contains no bromine. Excellent peel and shear properties. Very low smoke generation
574	7.0	34.9	110	Excellent balance of peel and shear. Low OSU heat release
576	6.5	29	95	Excellent shear and heat resistance. Low OSU heat release and smoke generation
590	8.0	35.7	95	Superior sheer + peel, passes radiant heat panel test

NON-FLAME RETARDANT PRESSURE SENSITIVE ADHESIVE FILMS

Adhesive	Typical peel strength		Adhesive wt. g/m ² (0.076 mm / 3 mil film)	Principle Characteristics
	Lbs/in	N/in		
585	6.3	28.5	81	Aggressive, high peel, good shear
610	5.6	25	80	B-stageable, crosslinks to give excellent heat and water resistance
614	7.5	34	77	High tack, general purpose mounting adhesive

THERMOPLASTIC FLAME RETARDANT FILM ADHESIVES

Bostik offers a variety of flame retardant thermoplastic films used for heat strippable mounting adhesives for aircraft decorative laminates. These films are also used in the electrical and electronics industries as adhesives for bonding materials with good fire retardant properties.

Product	Chemical description	Application temperature	Adhesive wt. g/m ² (0.076 mm / 3 mil film)	Principle Characteristics
307	Polyester Urethane	105°C	103	Extremely flexible
309	Epoxy Urethane	80°C	103	Low activation temperature
319	Polyester	90°C	109	Tough, flexible, low activation
321	Polyester	90°C	155	Is used in FR applications, which must pass UL 94 V0
337	Polyester	90°C	155	Non-halogenated FR that requires UL 94 V0
FPA110-FR	Polyamide	100°C	150	Is used to bond aerospace decorative laminates. Can be removed easily during refurbishment

HIGH PERFORMANCE THERMOSET FR FILM ADHESIVE

Product	Chemical description	Application temperature	Curing cycle	Adhesive wt. g/m ² (0.076 mm / 3 mil film)	Principle Characteristics
322	Polyester	90°C	<1 minute at 175°C	150	Thermoset version of 321 adhesive

THERMOPLASTIC NON-FR FILM ADHESIVE

Product	Chemical description	Application temperature	Adhesive wt. g/m ² (0.076 mm / 3 mil film)	Principle Characteristics
302	Polyester	120°C	94	Flexible, general purpose


OVERVIEW OF SUBSTRATES ON WHICH THE DIFFERENT FILM ADHESIVES CAN BE USED

Product	Tedlar	PVC	Aluminium	Phenolic	ABS	Polypropylene	Fabric	Fiberglass	Rubber	Urethane Foam	Metals
250			●	●			●		●		●
300	●	●	●	●	●		●	●	●	●	●
301	●	●	●	●	●		●	●	●	●	●
302	●	●	●	●			●			●	●
307	●	●	●	●			●	●			
309	●	●	●	●						●	●
311	●	●	●	●	●		●	●	●	●	●
312	●	●	●	●	●		●	●	●	●	●
314	●	●	●	●	●		●	●	●	●	●
319	●	●	●	●			●	●		●	●
321	●	●	●	●			●	●		●	●
322	●	●	●	●			●			●	●
337	●	●	●	●			●	●			
552	●	●	●	●	●	●				●	●
554	●	●	●	●	●	●				●	●
574	●	●	●	●	●	●				●	●
576	●	●	●	●	●	●				●	●
585	●	●	●	●	●	●				●	●
590	●	●	●	●	●	●	●	●	●	●	●
610	●	●	●	●	●	●				●	●
614	●	●	●	●	●	●	●			●	●
669	●	●	●	●				●			
676	●	●	●	●				●			
689	●	●	●	●				●			
700	●	●	●	●				●			
720	●	●	●	●				●			
767	●	●	●	●				●			
FPA110-1FR	●	●	●	●			●	●	●	●	●

BOSTIK'S NUMBERING SYSTEM

Bostik's numbering system is made up of three sections. XX-XXX-XX

- The first two digits represent the structure of the adhesive film:
 - 10 Single release liner with two-side release
 - 11 Tissue supported adhesive
 - 12 Customer supplied substrate
 - 13 PET supported adhesive
 - 14 Two release liner system
 - 15 Fiberglass substrates
 - 16 PET liner
 - 23 Two release liner, PET supported adhesive
- The second series of digits represent the adhesive system.
- The third series represents the film thickness including the support but excluding the liners.

For example: **F10-576-2** is a 2 mil adhesive film cast on a single release liner and self wound.

F14-576-2 is a 2 mil adhesive film cast on a release liner with a second release liner nipped in.



PACKAGING

Other packaging options are available. For details or more information please contact Bostik.

BOSTIK ADHESIVES AND SEALANTS

Bostik, the adhesive company, develops, manufactures and sells a wide range of high quality adhesives and sealants for professionals all over the world. The distinctive feature of Bostik is its innovative capability in combination with the demonstrable durability of its products. Bostik is renowned across a wide range of industries as a customer focused, hands-on problem solver. Bostik operates independently under the flag of the Total oil & gas company.

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