Adhesives

Pressure-sensitive adhesives (PSAs) provide a convenient, cost-effective and labor-efficient method to attach E-A-R materials to virtually any surface. E-A-R offers a PSA to match the specific needs of each material and ensure a strong bond.

PSAs must be applied to clean, dry substrates, free of dust, dirt, grease, oil, rust and chemical residues. Greasy surfaces may need to be cleaned with a solvent, and rusty surfaces may require wire brushing.

For proper installation, only one edge of the PSA sheet or part initially should be exposed by peeling back the release paper. After the part is positioned and the exposed adhesive is pressed into place, the remainder of the release paper can then be removed.

Firm uniform pressure should be applied to the adhesive sheet, either by hand or with a roller, starting at the center and working toward the outer edges. This will eliminate air pockets and help prevent bond failure. A permanent bond develops in 24 hours.

PSAs should be applied in an ambient temperature of 16C to 29C (60F to 85F). Once bonded in place, most PSAs perform well at a continuous service temperature range of -40C to 71C (-40F to 160F) and withstand intermittent exposure up to 93C (200F). When stored at a temperature of between 16C (60F) and 27C (80F), away from direct sunlight and with release liner in place, E-A-R's PSAs have an average shelf life of one year.

- Facilitate assembly or installation by eliminating separate application of adhesive
- Provide a strong, fail-resistant bond when correctly applied
- Develop permanent bond in 24 hours
- Maintain integrity in a wide service temperature range
- Can be stored for up to a year

Typical Properties

Property	PSA 34	PSA 60	PSA 20	PSA 500	PSA 550	PSA 555
Chemical Type	SBR	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic
Vehicle	Solvent	Solvent	Solvent	Solvent	Solvent	Solvent
Thickness cm (in)						
Adhesive	0.006 (.0025)	0.0081 (0.0032)	0.006 (.0025)	.0114 (.0045)	.0076 (.003)	.0046 (.0018) Both Sides
Adhesive Carrier	0.0013 (0.0005) PET	0.0013 (0.0005) PET	0.0013 (0.0005) PET	None	None	.0013 (.0005) PET
Peel Strength N/m (oz/in) PSTC-1						
at 1 min				876 (80)	657 (60)	602 (55)
at 10 min	1533 (140)	1959 (179)	985 (90)			
at 24 hr	2190 (200)	2003 (183)	1259 (115)			
Relative Tack (Initial) PSTC-5	High	Very High	Moderate	Moderate	Low	Moderate
Shear Strength PSTC-7						
2.5 cm x 2.5 cm (1 in x 1 in) at .5 kg	168 hr	35 hr				
2.5 cm x 2.5 cm (1 in x 1 in) at 1 kg			50 hr			
2.5 cm x 2.5 cm (1 in x 1 in) at 2.5 kg				650 min	220 min	>600 min
Resistance						
Oxidation and UV	Fair	Very Good	Very Good	Excellent	Excellent	Excellent
Water & Humidity	Fair	Good	Good	Excellent	Excellent	Excellent
Plasticizer & Oil	Poor	Fair	Fair	Excellent	Excellent	Excellent
Temperature Range C (F) Peak Performance	-40C to 71C (-40F to 160F)	-40C to 93C (-40F to 200F)	-40C to 93C (-40F to 200F)	-40C to 107C (-40F to 225F)	-40C to 107C (-40F to 225F)	-40C to 107C (-40F to 225F)
Recommended Max. Intermittent	93C (200F)	121C (250F)	107C (225F)	149C (300F)	149C (300F)	149C (300F)
Release Liner	Natural Kraft Paper	Silicone-Coated PET	Natural Kraft Paper or White Clay-coated Board	Bleached Kraft Paper or PE	Bleached Kraft Paper or PET	Natural Kraft Paper
Typically Applied to	TUFCOTE® Foams, Urethane Barriers, Barrier Absorber Composites	TUFCOTE Foams	TUFCOTE Foams Barrier Absorber Composites or (with Clay-coated Liner) ISOLOSS LS Foam	ISODAMP® Damping Sheets and Composites, CONFOR® Sheet	ISODAMP C-1000 Series, TUFCOTE Vinyl Barriers	ISOLOSS® HD and HDF, CONFOR foam
RoHS Compliant	Yes	Yes	Yes	Yes	Yes	Yes

The data listed in this materials summary are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.

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