

DESCRIPTION

Bonding of car body, bonding metallic structures (racing vehicles, aeronautics), bonding inserts and composite structures

PROPERTIES

- 2 component high performance room temperature cured epoxy adhesive
- Non sagging paste product suitable for vertical applications and to fill irregular joints
- Excellent mechanical and thermal performances up to 100°C
- Excellent strength to dynamic loads (vibrations and impacts)
- Product adapted to stringent ageing and aggressive environments

PHYSICAL PROPERTIES				
Composition		RESIN	HARDENER	MIXED
Mix ratio by weight		100	90	
Mix ratio by volume at 25°C		100	100	
Colour		beige brown black	beige	beige brown black
Viscosity at 25°C (Pa.s)	BROOKFIELD LVT	400	450	430
Specific gravity at 25°C (g/cm ³)	ISO 1675 : 1985	1.38	1.23	1.30
Pot life at 25°C on 100 g (min)	Gel Timer TECAM	-	-	30
Open time (min)	-	-	-	40

THERMAL AND MECHANICAL PROPERTIES (1)			
Hardness	ISO 868 : 2003	Shore D1 / D15	80 / 77
Tensile strength	ISO 527 : 1993	MPa	30
Elongation at break	ISO 527 : 1993	%	2
Glass transition temperature (tg)	ISO 11359 : 2002	°C	70
Coefficient of thermal expansion (CTE) (-30°C to +60°C)	ISO 11359: 1999	10 ⁻⁶ K ⁻¹	70
Working temperature	-	°C	-40 ; +100°C

EQUIPMENT

ADEKIT 140 packaged in 50 and 400 ml cartridges and requires a manual or pneumatic gun. Please consult our technical department for applications needing a machine.

SUBSTRATE PREPARATION

The item to be bonded must be free of all dirt, oil or other foreign matter. A clean, dry surface is a must. Consult our Technical Support and refer to the technical data sheet about surface preparations to choose adapted degreaser or cleaner

MECHANICAL PROPERTIES ON ASSEMBLIES

Time to obtain 1 MPa lap shear strength at 25°C	ISO 4587 : 2003	hr	4 hrs 30
Time to obtain 50% final lap shear strength at 25°C	ISO 4587 : 2003	hr	20
Lap shear strength on aluminium	ISO 4587 : 2003	MPa	21 CF(3)
Floating roller peel resistance (2)	ISO 4578 : 1997	kN/m	5 CF
Lap shear strength after moist cataplasme 15 days at 80°C	ISO 4587 : 2003	MPa	20 CF
Lap shear strength after a thermal shock ageing cycle 15 cycles D3 (see annex)	ISO 4587 : 2003	MPa	20 CF
Lap shear strength after ageing in immersion for 3 weeks : - motor oil at 70°C - hydrochloric acid (0.1 N) at 23°C - soda (0.1 N) at 23°C - seawater at 23°C - gasoil at 23°C - gas at 23°C	ISO 4587 : 2003 ISO 175 : 1999	MPa	16 CF 17 CF 21 CF 21 CF 19 CF 21 CF
Lap shear strength after thermal ageing 3 weeks at 100°C	ISO 4587 : 2003	MPa	21 CF

(1) Lap shear strength on aluminium 2017A etched in sulfochromic bath

(2) Hardening conditions: 8 hrs at 80°C + 48 hrs at room temperature

(3) According to ISO 10365:1992 : CF = Cohesive failure, AF = Adhesive failure, SAF = Superficial adhesive failure, SF := Support failure

HANDLING PRECAUTIONS

It is recommended to use the product at a temperature between +18°C and +35°C. Normal health and safety precautions should be observed when handling these products :

- ensure good ventilation
- wear gloves and safety glasses
- wear waterproof clothes

For further information, please consult the product safety data sheet.

STORAGE CONDITIONS

Shelf life of ADEKIT A140/ H9940 is 12 months stored in its original unopened packaging at a temperature between +15°C and +25°C.

PACKAGING

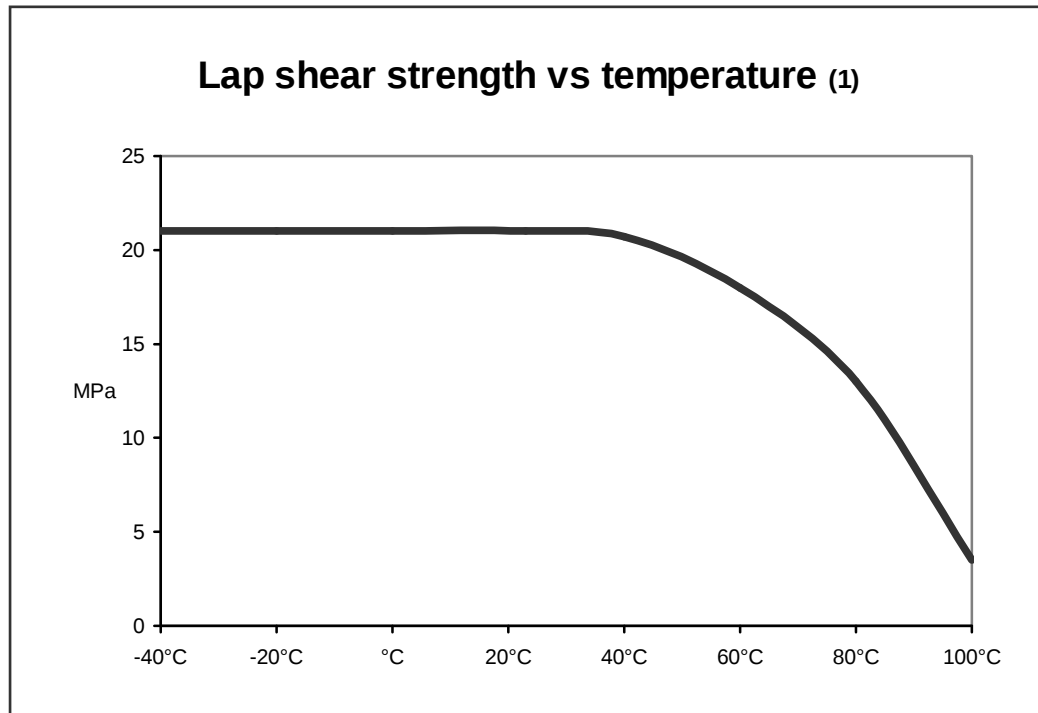
BLACK		BEIGE		BROWN	
A 140/50 NR A 140/400 NR	H 9940 NR	A 140/400 BE	H 9940 BE	A 140/50 MN	H 9940 MN
12 cartridges	5 + 4.5 kg 6(0.5+0.45)kg 40 + 36 kg	12 cartridges	5 + 4.5 kg	12 cartridges	40 + 36 kg

GUARANTEE

The information contained in this technical data sheet result from research and tests conducted in our Laboratories under precise conditions. It is the responsibility of the user to determine the suitability of AXSON products, under their own conditions before commencing with the proposed application. AXSON guarantee the conformity of their products with their specifications but cannot guarantee the compatibility of a product with any particular application. AXSON disclaim all responsibility for damage from any incident which results from the use of these products. The responsibility of AXSON is strictly limited to reimbursement or replacement of products which do not comply with the published specifications.

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ANNEX



(1) Hardening conditions: 8 hrs at 80°C + 48 hrs at room temperature

THERMAL SHOCK TEST ACCORDING TO ISO 9142 : 1993 NORM

D3 cycle

