

STRUCTURAL THIXOTROPIC EPOXY ADHESIVE

DESCRIPTION

Bonding of elements of metallic or composite structures, bonding of car body, aeronautic applications.

PROPERTIES

- 2 component high performance room temperature cured epoxy adhesive
- Suitable for edgewise assemblies
- Slow setting product adapted to cover and bond wide surfaces
- 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	100	
Mix ratio by volume at 25°C		100	100	
Colour		black	light grey	black
Specific gravity at 25°C (g/cm ³)	ISO 1675 : 1985	1.23	1.23	1.23
Pot life at 25°C on 100 g (min)	Gel Timer TECAM			23
Open time (min)	-	-		30

THERMAL AND MECHANICAL PROPERTIES (1)				
Hardness		ISO 868 : 2003	Shore D1 / D15	83 / 80
Tensile strength		ISO 527 : 1993	MPa	40
Elongation at break		ISO 527 : 1993	%	5
Glass transition temperature (tg)		ISO 11359 : 2002	°C	60
Coefficient of thermal expansion (CTE) (-40°C to +50°C)		ISO 11359: 1999	10 ⁻⁶ K ⁻¹	90
Working temperature		-	°C	-40 ; +100

EQUIPMENT

ADEKIT 170 BK packaged in 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

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MECHANICAL PROPERTIES ON ASSEMBLIES

Time to obtain 1 MPa lap shear strength at 25°C	ISO 4587 : 2003	hr	3 hr 30
Time to obtain 50% final lap shear strength at 25°C	ISO 4587 : 2003	hr	19
Lap shear strength on aluminium	ISO 4587 : 2003	MPa	24 CF(3)
Floating roller peel resistance (2)	ISO 4578 : 1997	kN/m	5 CF
Lap shear strength after moist cataplastm 15 days at 80°C	ISO 4587 : 2003	MPa	20 CF
Lap shear strength after a thermal shock ageing cycle 15 cycles D3 (4)	ISO 4587 : 2003	MPa	21 CF
Lap shear strength after ageing in immersion for 3 weeks : <ul style="list-style-type: none"> • 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	24 CF 24 CF 24 CF 22 CF 24 CF 24 CF
Lap shear strength after thermal ageing 3 weeks at 100°C	ISO 4587 : 2003	MPa	22 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

(4) Cycles D3 according to ISO 9142 : 1993

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 A 170 BK is 12 months stored in its original unopened packaging at a temperature between +15°C and +25°C.

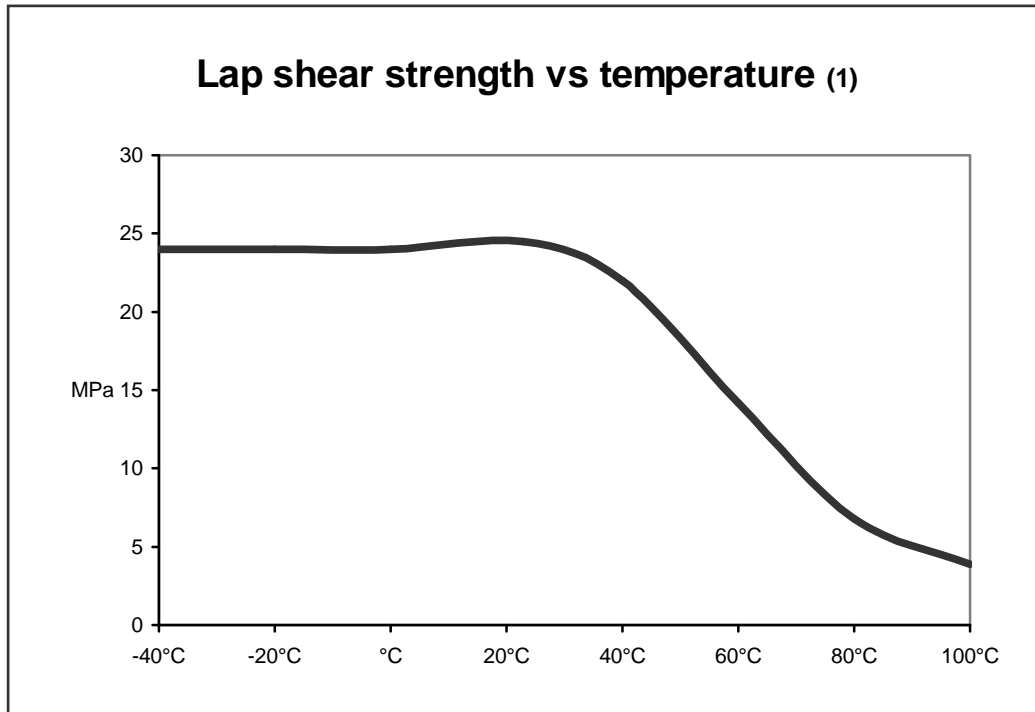
PACKAGING

A 170/ 400 BK
12 cartridges

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.

ANNEX



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