

PRODUCT DATA SHEET

ADEKIT A140-1 / H9940-1

TWO-COMPONENT EPOXY ADHESIVE HIGH PERFORMANCES

DESCRIPTION

Bonding of car body, of metallic structures (racing vehicles)
Bonding in Aeronautic, bonding of inserts, of Composite structures.

PROPERTIES

- 2 component high performances room temperature curing Epoxy adhesive
- Non sagging pasty product suitable for vertical applications and to fill irregular joints
- Excellent mechanical performances
- Excellent strength to dynamic loads (vibrations and impacts)
- Product adapted to stringent ageing and aggressive environments

PHYSICAL PROPERTIES

Composition	RESIN	HARDENER	MIX	METHOD
Mix ratio by weight	100	90		
Mix ratio by volume at 25 °C	100	100		
Colour	Beige (BG) Black (BK)	Beige	Beige (BG) Black (BK)	
Density at 25 °C ^(KP)	1.38	1.22	-	LT-020
Density of cured product at 23 °C	-	-	1.30	ISO 2781
Viscosity at 25 °C (Pa.s)	950 ^(KP)	380	370	LT-054 / 0.1 s ⁻¹
Pot life at 25°C on 100g ^(KP) (min)	-	-	25	LT-002
Open time on 7mm bead at 23°C (min)	-	-	40	LT-006-B

^(KP) Key properties. These values are enclosed in Certificate of Analysis.

MECHANICAL PROPERTIES ⁽¹⁾

Hardness (Shore D)		80	ISO 868
Tensile strength (MPa)		30	ISO 527-2
Elongation at break (%)		4	ISO 527-2
Young Modulus (MPa)		2500	ISO 527-2
Recommended application temperature (°C)		15 to 30	
Working temperature ⁽²⁾ (°C)		- 40 to 130	LT-006-B

⁽¹⁾ Cured 16 hours at 70 °C

⁽²⁾ Working temperature is defined as the temperature at which product keeps 80 % of its initial Lap Shear Strength after 1000 hours ageing at this temperature, value on Aluminium, measured at 23 °C.

HANDLING TIME ⁽¹⁾

At 23 °C	4h	
At 40 °C	1 h 30	LT-006-B
At 60 °C	30 min	

(1) Handling time is defined as the time needed to obtain Lap Shear Strength on Aluminium at 23 °C, of 1 MPa.

MECHANICAL PROPERTIES ON ASSEMBLIES ⁽¹⁾

	LAP SHEAR STRENGTH AT 23 °C (MPa)	METHOD
Aluminium 2017A (sandblasted)	Initial	20 CF
	After wet cataplast 7 days at 70 °C / 100 % RH	16 CF
	After 21 cycles D3 ⁽²⁾	16 CF
Stainless Steel 304 (sandblasted)		23 CF
Electro-galvanized Steel (sandblasted)		21 CF
Electro-galvanized Steel (Acetone wiped)		20 CF
ABS (sanded + Isopropanol)		5 SF
PC (sanded + Isopropanol + Plastic primer ⁽³⁾)		2 AF
PVC (sanded + Isopropanol)		5 SF
PMMA (sanded + Isopropanol + plastic primer ⁽³⁾)		3 AF
PA6E (sanded + Isopropanol)		4.5 SF/AF
GFR Polyester (Isopropanol wiped)		7 DF
GFR Epoxy (Isopropanol wiped)		17 SCF

(1) Cured 16 hours at 70 °C

(2) Cycle D3 : 16 h at 40 °C/95 % RH + 3 h at -20 °C + 5 h at 70 °C/50 % ± 5 % RH, according to ISO 9142 standard

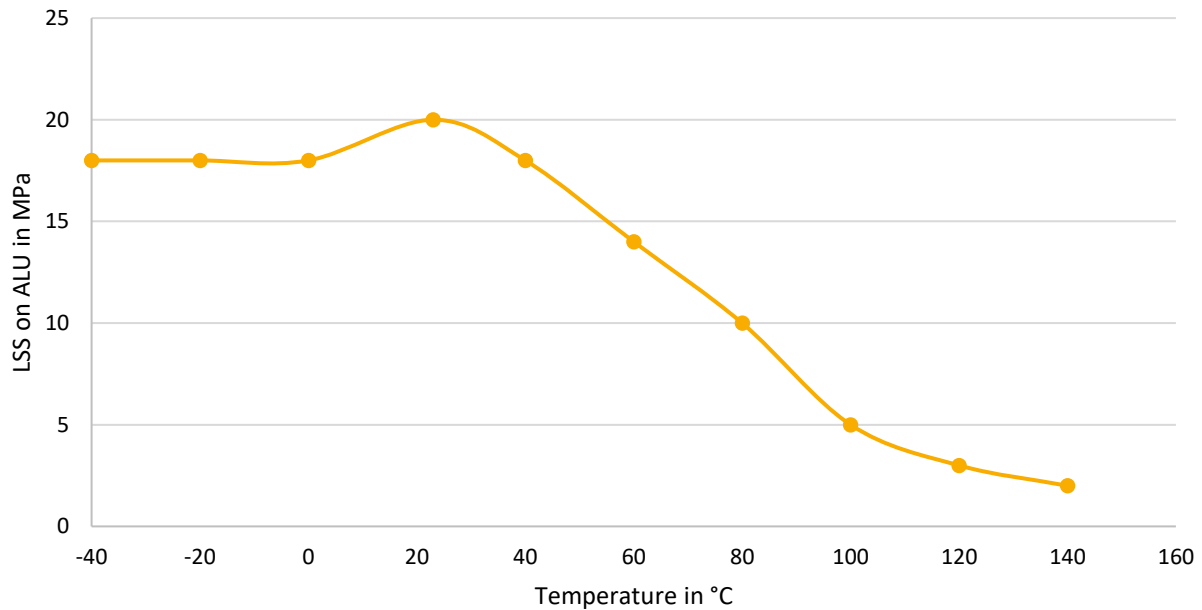
(3) Plastic sanded, Isopropanol wipe and coated with Sika Advanced Resins Plastic Primer 5069

CF : Cohesive Failure, AF : Adhesive Failure, SCF : Special Cohesive Failure, SF : Substrate Failure, DF : Delamination Failure, SCF : Special Cohesive Failure, according to EN ISO 10365 Standard

FLOATING ROLLER PEEL STRENGTH AT 23 °C

Aluminium 2017A (sandblasted)	(kN/m)	6	ISO 4578
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Lap Shear Strength on ALU VS Temperature



PROCESSING

- **Equipment:** ADEKIT A140-1 is packaged in 50 ml and 400 ml cartridges and require 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 about surface preparations.**

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products:

- Ensure good ventilation.
- Wear gloves, glasses and protective clothes.

For further information, please consult the Safety Data Sheet.

STORAGE CONDITIONS

Shelf life of **ADEKIT A140-1** is **12 months** stored in a dry place and in its original unopened packaging at a temperature between 15 °C and 25 °C.

Shelf life of **ADEKIT H9940-1 Resin and Hardener** is **12 months** stored in a dry place and in their original unopened packaging at a temperature between 15 °C and 25 °C.

PACKAGING

■ A140-1 / 50 ml	Box of 12 cartridges
■ A140-1 / 400 ml	Box of 12 cartridges
■ H9940-1 BG Resin	5 kg
■ H9940-1 BG Resin + H9940-1 Hardener	(5 kg + 4.5 kg) KIT
■ H9940-1 BK Resin	0.5 kg, 5 kg, 40 kg
■ H9940-1 BK Resin + H9940-1 BK Hardener	(5 kg + 4.5 kg) KIT
■ H9940-1 Hardener	6 (0.5 kg + 0.45 kg) KIT
	0.45 kg, 4.5 kg, 36 kg

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Advanced Resins. Copies of the following publications are available on request: Safety Data Sheets.

VALUE BASES

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTICE

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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