BUILDING TRUST

PRODUCT DATA SHEET

SikaForce®-436 L25 – SikaForce®-436 L120 (ADEKIT A236 / H6236)

BI COMPONENT POLYURETHANE ADHESIVE
LARGE COMPOSITE PARTS BONDING

DESCRIPTION

Bonding of large Composite parts (RTM, SMC, GRP, Laminate)

Bonding of metallic structures, plywood for application requiring high performances and flexibility in Transport industries (truck, bus) and Marine (hull bonding, deck bonding, interior design).

Exist in two cure speeds.

PROPERTIES

- Non sagging pasty product with gap filling up to 30 mm in vertical and ceiling application ; 60 mm in horizontal.
- **Exist in Grey, Black for Carbon bonding, clear Green and White.**
- Excellent strength to dynamic loads (vibration and impact)
- Odor and solavent free
- Long open time with reduced handling time
- Usable with dispensing machines equiped with pressure vessels

PHYSICAL PROPERTIES

Composition			POLYOL (A)	ISOCYANATE (B)	MIX	METHOD
Mix ratio by weight			92	100		
Mix ratio by volume at 25 °C			100	100		
Colour		**- 25**	Clear grey / Black	Beige	Grey / Black	
		- 120	Clear blue / White		Green/White	
Density at 25 °C (KP)		**- 25**	1.29*	1.40*	1.34**	LT-020*
Density cured product at 23 °C		**- 120**			1.35**	ISO2781**
Viscosity at 25 °C (KP)	(Pa.s)	**- 25**	210*	55*	Thixotropic paste	LT-001*
		- 120	95**			ISO 2781**
Open time on 7mm bead on Polyester Composite at 23 °C	(min)	**- 25**	-	-	25	LT-006-B
		- 120			120	
Flow threshold on bead (KP)	%		-	-	< 5	LT-017/ Comb-shaped spatula 40 mm

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

MECHANICAL PROPERTIES [1]

Hardness [KP] [2]	(Shore D)	55	ISO 868
Tensile strength	(MPa)	12	ISO 527
Elongation at break	(%)	60	ISO 527
Young Modulus	(MPa)	84	ISO 527
Recommended use temperature	(°C)	15 - 35	-
Working temperature [3]	(°C)	-40°C to 120	LT-006-B

(KP) : Key Poperties. These values are enclosed in Certificate of Analysis.

(1) Cured 16 hours at 70°C

(2) Cured 24 hours at 23°C

(3) 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	**- 25** **- 120**	3h30 6h	LT-006-B
At 40 °C	**- 25** **- 120**	1h30 3h	
At 60 °C	**- 25** **- 120**	30 min 50 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		METHOD
Aluminium 2017A (sandblasted)	(MPa)	**Initial**	**16 CF/SCF**	**LT-006-B**
		After wet cataplasm 7 days at 70°C / 100% RH	**15 AF/CF**	
Stainless Steel 304 (sandblasted)	(MPa)	**Initial**	**18.5 SCF**	
		After wet cataplasm 7 days at 70°C / 100% RH	**18.5 SCF/AF 20 %**	
Electro-galvanized Steel (sandblasted)	(MPa)		**13 AF**	
Electro-galvanized Steel (acetone wipe)	(MPa)		**16.5 CF**	
ABS (sanded + Isopropanol)	(MPa)		**3 SF**	
PC (sanded + Isopropanol + plastic primer [2])	(MPa)		**2.5 AF**	
PVC (sanded + Isopropanol + plastic primer [2])	(MPa)		**5 SF**	
PMMA (sanded + Isopropanol)	(MPa)		**5 SF**	
PA6E (sanded + Isopropanol + plastic primer [2])	(MPa)		**2.5 SF**	

GFR Polyester (Isopropanol wipe)	(MPa)	**8 DF**	

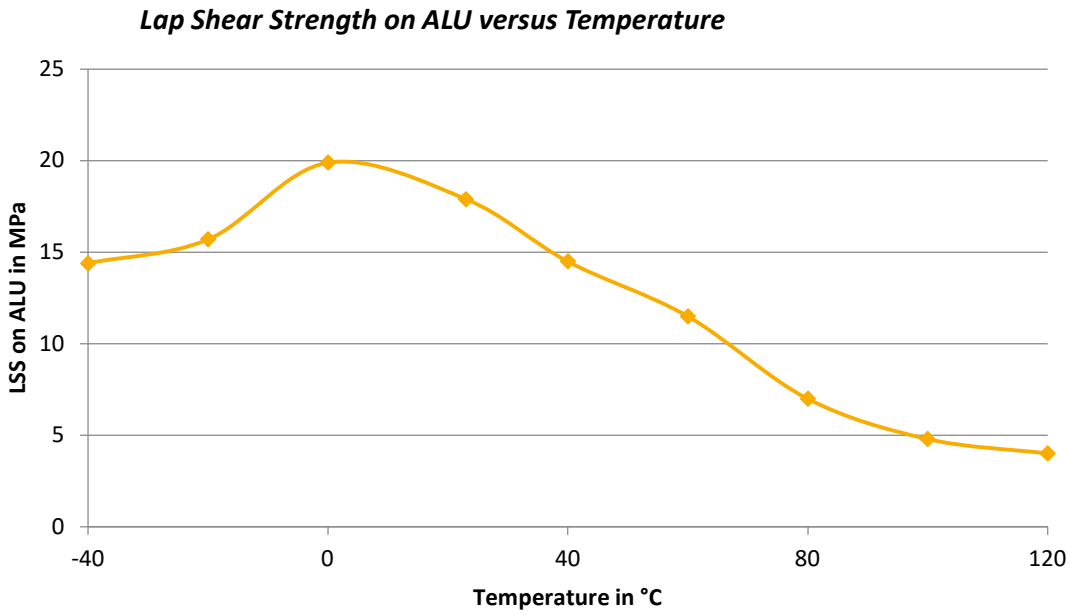
(1) Cured 16 hours at 70°C

(2) Plastic sanded, Isopropanol wipe and coated with Sika Plastic Primer

CF : Cohesive Failure, AF : Adhesive Failure, SCF : Special Cohesive Failure, SF: Substrate Failure, DF: Delamination Failure, according to EN ISO 10 365 Standard.

FLOATING ROLLER PEEL STRENGTH AT 23°C

			METHOD
Aluminium 2017A (sandblasted)	(kN/m)	**5**	ISO 4578



PROCESSING

- **Equipment**: **SikaForce®-436 L25 (AB) and L120 (AB)** are packaged in 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.
- **Wet Lay-up Polyester or Vinyl ester must be primed or grinded prior to bonding.**
- **Infused Polyester or Vinyl ester : remove the peel ply just prior to bonding.**

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 Sheets.

STORAGE CONDITIONS

Shelf life of **SikaForce®-436 L25 (AB) and L120 (AB)** is **9 months** in a dry place and in original unopened containers at a temperature between 15 and 25° C.
Shelf life of **SikaForce®-436 L25 (A) and L120 (A) (POLYOLS)** is **9 months** in a dry place and in original unopened containers at a temperature between 15 and 25° C.
Shelf life of **SikaForce®-436 (B) (ISOCYANATE)** is **9 months** in a dry place and in original unopened containers at a temperature between 15 and 25° C.

PACKAGING

■ SikaForce®-436 L25 GREY (AB)	Box of 12 cartridges
■ SikaForce®-436 L25 BLACK (AB)	Box of 12 cartridges
■ SikaForce®-436 L120 GREEN (AB)	Box of 12 cartridges
■ SikaForce®-436 L120 WHITE (AB)	Box of 12 cartridges
■ SikaForce®-436 (B) (Isocyanate)	6 kg, 30 kg, 280 kg
■ SikaForce®-436 L25 GREY (A) (Polyol)	28 kg
■ SikaForce®-436 L120 BLUE (A) (Polyol)	5.5 kg, 28 kg, 266 kg
■ SikaForce®-436 L120 WHITE (A) (Polyol)	28.5 kg, 266 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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