

Product Data Sheet

Version 5/2013 (04/2014)

SikaForce®-7818 L7

High-Performance, Non-Sagging Structural Adhesive for Wind Turbine Bonding Applications

Technical Data

	Comp. A: SikaForce®- 7818 L7	Comp. B: SikaForce®- 7050
Chemical Base	Polyols	Isocyanate derivatives
Colour (CQP ¹ 001-1) Colour - Mixed	White	Brown
	Beige	
Cure Mechanism	Polyaddition	
Density (CQP 553-2) Density - Mixed (calculated)	1.23 g/cm ³ approx	1.24 g/cm ³ approx
	1.23 g/cm ³ approx	
Mixing Ratio ³	By volume (recommended) By weight	
	100 : 45 100 : 45	
Solids Contents	100%	
Viscosity ² (CQP 538-2)	Brookfield - RVT 7/5 Brookfield - RVT 5/10	
	500 Pa·s approx 35 Pa·s approx	
Consistency - Mixed	Thixotropic paste	
Application Temperature	15°C to 30°C	
Application Time ² (CQP 536-3)	3 min. approx.	
Pot Life ² (CQP 536-3)	7 minutes approx	
Shore D-Hardness (CQP 537-2/DIN 53505)	75 approx	
Tensile Strength (CQP 545-2/ISO 527)	35 N/mm ² approx	
Elongation at Break (CQP 545-2/ISO 527)	2.5% approx	
Elastic Modulus (CQP 545-2/ISO 5270)	2500 N/mm ² approx	
Tensile Lap-Shear Strength (CQP 546-2/ISO 4587)	20 N/mm ² approx	
Glass Transition Temperature (CQP 509-1/ISO 4663)	45°C	
Shelf Life (CQP 016-1)	Drums	12 months
	Cartridges, Cans and Pails	6 months
	9 months	
¹ CQP: Corporate Quality Procedure ² 23°C and 50% Relative Humidity ³ For cartridges, the mixing ratio is 2 : 1.		

Description

SikaForce®-7818 L7 is the base-part of a two-component polyurethane adhesive used with the hardener, SikaForce®-7050. SikaForce®-7818 L7 is manufactured in accordance with the ISO 9001/14001, quality assurance system.

Product Benefits

- Excellent non-sag behaviour;
- Short application- and curing-time;
- High strength and modulus for structural bonding applications.

Areas of Application

SikaForce®-7818 L7 is used in various bonding applications in the wind turbine manufacturing process, e.g. the attachment of mounting parts, lightning protection, etc. This product is suitable for professional experienced applicators only. Tests with actual substrates and conditions must first be performed to ensure adhesion and material compatibility.



Cure Mechanism	SikaForce®-7818 L7 cures as the result of a chemical reaction between the two components. Higher temperatures speed up the curing process, while lower temperatures slow it down.
Environmental Resistance	We recommend project-related testing based on anticipated chemical and/or thermal exposure. Please consult the Technical Services Department of Sika Industry for advice.
Surface Preparation	It is reasonable to expect that the surfaces will need to be adequately prepared prior to bonding if optimal adhesion and strength is to be achieved. Based on the surface condition and type of material, physical and/or chemical pre-treatment may be required after the cleaning process. Advice on specific applications is available from the Technical Services Department of Sika Industry.
Mixing	Thoroughly stir the base Component A in its original packaging before undertaking to mix it with Component B. Pour the desired amount of Component A into a mixing pot and add to it the hardener (Component B) at a rate of 45 parts for every 100 parts of Component A. Stir constantly until a homogeneous mixture is obtained. Apply the mixed adhesive within the Application Time. For more detailed information, please contact Sika Industry's Technical Services Department. It is possible to apply SikaForce®-7818 L7 using automatic application equipment. For advice on selecting and setting up a suitable pump system, please contact the System Engineering Department of Sika Industry.
Removal	Uncured SikaForce®-7818 L7 may be removed from tools and equipment with SikaForce®-7260 Cleaner. Cured material can only be removed mechanically. Hands and exposed skin should be washed immediately using Sika® HandClean towels or other suitable industrial hand cleaner and water. Do not use solvents!
Storage	SikaForce®-7818 L7 must be stored in a dry area at a temperature between 10°C and 30°C. Do not expose to direct sunlight or frost. After the packaging is opened, the contents should be protected from humidity. Minimum temperature during transportation is -20°C for a maximum of 7 days. For Component B, please refer to its individual Product Data Sheet.
Further Information	Copies of the following publications are available upon request: Material Safety Data Sheet.
Packaging	Component A: 1 kg cans; 20 kg pails; 240 kg drums Component B: 0.45 kg cans; 1 kg cans; 5 kg cans; 20 kg pails; 250 kg drums. Two-Part Cartridges: 195 ml.
Value Bases	All technical data stated in this Product Data Sheet are laboratory test-based. Current measured values may vary due to factors beyond our influence.
Health and Safety Information	For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the current Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data for the appropriate type of substance. Product Data Sheets and Material Safety Data Sheets are available on our website at: www.sika.ca or via your local Sika representative.

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, within their shelf life. 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 recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request or can be accessed in the Internet under www.sika.ca.

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