

# SikaForce®-7810 L80

High performance non-sagging structural adhesive for wind turbine blade bonding

## Technical Product Data

Properties	Component A SikaForce®-7810 L80	Component B SikaForce®-7050
Chemical base	Polyols	Isocyanate derivatives
Color (CQP <sup>1</sup> 001-1)	White	Brown
Color mixed	Beige	
Curing mechanism	Polyaddition	
Density (CQP 553-2)	1.23 g/cm <sup>3</sup> approx.	1.22 g/cm <sup>3</sup> approx.
Density mixed (calculated)	1.23 g/cm <sup>3</sup> approx.	
Mixing ratio	by volume (recommended) by weight	
	100 : 45 100 : 45	
Solids content	100%	
Viscosity (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 - 30°C (60 - 85°F)	
Application time <sup>2</sup> (CQP 536-3)	40 min. approx.	
Pot life <sup>2</sup> (CQP 536-3)	80 min. approx.	
Shore D hardness <sup>2</sup> (CQP 537-2 / DIN 53505)	75 approx.	
Tensile strength (CQP 545-2 / ISO 527)	30 N/mm <sup>2</sup> approx.	
Elongation at break (CQP 545-2 / ISO 527)	3% approx.	
E-Modulus (CQP 545-2 / ISO 527)	2800 N/mm <sup>2</sup> approx.	
Tensile lap-shear strength (CQP 546-2 / ISO 4587)	20 N/mm <sup>2</sup> approx.	
Glass transition temperature (CQP 509-1 / ISO 4663)	45°C (113°F) approx.	
Shelf life (CQP 016-1) (storage between 10°C and 30°C)	12 months	6 months

<sup>1)</sup> CQP = Corporate Quality Procedure

<sup>2)</sup> 23°C (73°F) / 50% r.h.

### Description

SikaForce®-7810 L80 is the base part of a two component polyurethane adhesive used with hardener SikaForce®-7050.

SikaForce®-7810 L80 is manufactured in accordance with ISO 9001 /14001, quality assurance system and with the responsible care program.

### Product Benefits

- Excellent non-sag behaviour
- Long open time
- Fast strength build up at moderate curing temperatures within short curing times
- High strength and modulus for structural bonding of wind turbine blades

### Areas of Application

SikaForce®-7810 L80 is used for bonding of rotor blades in the wind turbine industry.

This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Industry



### Cure Mechanism

The curing of SikaForce®-7810 L80 takes place by chemical reaction of the two components. Higher temperatures speed up the curing process and lower temperatures slow down the curing process.

### Environmental Resistance

In case of expected chemical or thermal exposure, we recommend a project related testing. Please consult the Technical Department of Sika Industry for advice.

### Method of Application

#### Surface preparation

Usually it is necessary to prepare the substrates for bonding to ensure optimal adhesion and strength. Based on the surface condition and type of material, physical or chemical pre-treatment may be required after the cleaning process.

Advice on specific applications is available from the Technical Department of Sika Industry.

#### Mixing

For manual application stir the base part in the original containment thoroughly before use.

Fill the desired amount of A-component into mixing pot and add the hardener in the given ratio. Stir constantly until a homogeneous mixture is obtained. Apply mixed adhesive within application time. Consult Technical Service Department of Sika Industry for detailed information.

SikaForce®-7810 L80 can be applied with automatic application equipment. For advice on selecting and setting up a suitable pump system contact the System Engineering Department of Sika Industry.

### Cleaning

Uncured SikaForce®-7810 L80 may be removed from tools and equipment with SikaForce®-7260 Cleaner. Once cured, the material can only be removed mechanically. Hands and exposed skin should be washed immediately using Sika® Handclean towels or a suitable industrial hand cleaner and water. Do not use solvents!

### Storage Conditions

SikaForce®-7810 L80 has to be kept between 10°C and 30°C in a dry place. Do not expose to direct sunlight or frost. After opening of the packaging, the contents should be protected against humidity.

The minimum temperature during transportation is 0°C.

For the B-component refer to the actual Product Data Sheet.

### Further Information

The following publications are available on request:

- Safety Data Sheet

### Packaging Information

#### SikaForce®-7810 L80

Pail	24 kg
Drum	240kg

#### SikaForce®-7050

Can	0.45 kg (6x) 1 kg 5 kg
Pail	20 kg
Drum	250 kg

### 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 Notes

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.

Further information available at:

[www.sika.co.uk](http://www.sika.co.uk)

[www.sika.com](http://www.sika.com)

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