Industry

SikaForce®-7812 L7 MR

High performance moisture resistant adhesive used as filler for wind turbine blades

Technical Product Data

Properties	Component A SikaForce-7812 L7 MR	Component B SikaForce-7010
Chemical base	Polyols	Isocyanate derivatives
Colour (CQP[1] 001-1)	White	Brown
Colour mixed	Beige	
Curing mechanism	Polyaddition	
Density (CQP 006-4)	1.25 g/cm³ approx.	1.22 g/cm³ approx.
Density mixed (calculated)	1.24 g/cm³ approx.	
Mixing ratio by weight	100 : 40	
by volume (recommended)	100 : 41	
Solids content	100%	
Viscosity[2] (CQP 538-2) Brookfield - RVT 6/10	30'000 mPa·s approx.	
Brookfield - RVT 5/10		250 mPa·s approx.
Consistency (mixed)	Thixotropic paste	
Application temperature	10 - 35°C (50 - 95°F)	
Application time[2] (CQP 536-3)	3 min. approx.	
Pot life[2] (CQP 536-3)	6 min. approx.	
Shore D hardness[2] (CQP 537-2 / DIN 53505)	80 approx.	
Tensile strength (CQP 545-2 / ISO 527)	40 N/mm² approx.	
Elongation at break (CQP 545-2 / ISO 527)	2% approx.	
E-Modulus (CQP 545-2 / ISO 527)	2000 N/mm² approx.	
Tensile lap-shear strength (CQP 546-2 / ISO 4587)	20 N/mm² approx.	
Glass transition temperature (CQP 509-1 / ISO 11357-2)	60°C (140°F)	
Shelf life (CQP 016-1) (storage between 10°C and 30°C)	Twelve (12) months	Nine (9) months

[1] CQP = Corporate Quality Procedure [2] 23°C (73°F) / 50% r.h.

Description

SikaForce-7812 L7 MR is the base part of a two component polyurethane adhesive used with hardener SikaForce-7010.
SikaForce-7812 L7 MR is manufactured in accordance with ISO 9001 / 14001 quality assurance system and with the responsible care program.

Product Benefits

- Excellent application and non-sag properties
- Long open time at high temperature and humidity
- Short application and curing time
- Excellent moisture resistance

Areas of Application

SikaForce-7812 L7 MR is designed for various applications, e.g. the filling of pin holes and scratches ensuring a smooth finish of wind turbine blades.
The product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Cure Mechanism

The curing of SikaForce-7812 L7 MR takes place by chemical reaction of the two components. Higher temperatures speed up 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 Service 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 Service 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. Please consult Technical Service Department of Sika Industry for detailed information.

SikaForce-7812 L7 MR can be applied with automatic application equipment. For advice on selecting and setting up a suitable pump system please contact your local Sika Sales Representative.

Cleaning

Uncured SikaForce-7812 L7 MR 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 a suitable industrial hand cleaner and water. Do not use solvents!

Storage Conditions

SikaForce-7812 L7 MR 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.
Minimum temperature during transportation is -20°C for maximum 7 days.
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-7812 L7 MR (A+B)

MixPax	0.3kg

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

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