



AKZO NOBEL

Information

Casco Adhesives

TROPICAL

SYNTEKO® 1989B AND HARDENER 1993

Synteko® 1989B with hardener 1993 is used for the gluing of wood to wood. It gives glue joints with a very high strength in various environments. The bond has a high degree of heat, creep and solvent resistance.

Synteko® 1989B with hardener 1993 can be used in both cold and hot pressing as well as for RF-press.

TECHNICAL DATA

Type	1989B Water-based dispersion 1993 MDI-type Isocyanate
Delivery form	1989B Liquid 1993 Liquid
Colour	1989B Light brown 1993 Brownish clear
Viscosity	1989B approx. 10000 mPas. Brookfield LVT, sp. 4, 6 rpm, 25°C 1993 approx. 300 mPas, Brookfield LVT, sp. 2, 30 rpm, 25°C
Density	1989B 1300 kg/m ³ 1993 1200 kg/m ³
pH	1989B 6 - 7

HEALTH AND SAFETY

Labelling	1989B --- 1993 Harmful. Contains diisocyanatodiphenylmethane (MDI) Ensure good ventilation.
Handling and cleaning Instructions	The hardener and glue mixture contain isocyanate. Careful hygiene must be maintained. In case of skin contact, wash with water and soap. Use protective gloves, suitable for isocyanates, and goggles. Do not allow the hardener to come in contact with water or moisture. Clean application tools with water before curing.

**SYNTEKO® 1989B AND HARDENER 1993
OTHER DATA**

Application tools	Toothed trowel, brush, roller spreader.
Properties of the glue joint	When used according to the conditions outlined in this data sheet plus the general observance of good gluing practices, 1989B/1993 produces bond which has a good resistance to creep under sustained load.
Storage life	1989B 1 year in well closed package at 20°C 1993 1 year in well closed package at 20°C If the packaging is left open when not in use the glue is susceptible to skin formation on the surface. To avoid this the packaging should be closed when not in use.
Temperature sensitivity	1989B must not be exposed to temperatures below 0° or above 30°C. 1993 must not be exposed to temperatures below 5°C or above 30°C
DIRECTIONS FOR USE	
Moisture content	8-15%
Mixing equipment	Casco Wood Adhesives mixers or mixing by hand.
Mixing proportions	1989B 100 parts by weight (pbw) 1993 15 parts by weight (pbw)
Mixing time	About 2 minutes when mixing by hand. About ½ minute with electrical mixer. The mixture must be homogeneous. In Casco Products automatic mixers the homogeneous mixture is obtained instantly.
Pot life	1 hour at 20°C.
Glue spread	150 - 250 g/m ² , preferably double-sided application
Assembly time	The assembly time is the time between spreading of the glue and the moment when the material to be glued are put under pressure in the press. It consists of an open assembly time (OAT) and a closed assembly time (CAT). The OAT is the time between glue application and assembly of the pieces to

SYNTEKO® 1989B AND HARDENER 1993

be glued. The CAT is the time between assembly of the pieces to be glued and the initiation of pressure in the press.

The pressure must be applied while the glue is still tacky.

The assembly times are influenced by the glue spread, the method of applying and the glue (ribbon or roller spreader), the temperature and relative humidity in the working area, the wood species, the moisture content and the temperature of the wood etc. The assembly times are prolonged when the glue spread is high, the temperature in the working area is low, the moisture content in the air is high and the wood is slowly absorbing the water in the glue. The press time will also be prolonged.

For questions under specific working conditions our technical advisor should be contacted.

Open assembly time Max. 7 minutes at 20°C. Apply some extra adhesive if the assembly time is longer.

(pine-pine) A long open assembly time will shorten the max. closed assembly time.

Closed assembly time (pine-pine) Max. 10 minutes at 20°C

Pressing time and temperature The 1989B/1993 system can be used between +5°C and +30°C. Depending on temperature, wood species and pressing time, different bond qualities can be reached:

Temperature, °C	Wood species	Pressing time	Bond quality
+5	Oak	1½ hour*	JAS 112 CWS
+5	Maple	1 hour*	JAS 112 CWS
+5	Spruce	1 hour*	JAS 112 CWS
+10	Oak	1 hour*	JAS 112 CWS
+20	Oak	1 hour*	JAS 112 CWS
+20	Rubber wood	1 hour*	JAS 112 CWS
+20	Birch	1 hour*	JIS K 6806
+20	Spruce	10 – 20 minutes	JAS 111 CWS/BWS, JAS 112 CWS/ BWS

*These pressing times are not optimised.



SYNTEKO® 1989B AND HARDENER 1993

Note that the bond quality given in the table will be reached when using a glue mixture which is up to 1 hour old.

Pressure

0,1-1.0 MPa. Thoroughly planed surfaces with good contact give the best result.

ONLY FOR PROFESSIONAL USE.

BEFORE USING THIS PRODUCT FOR A PURPOSE OTHER THAN PROFESSIONAL, PLEASE CONTACT US.

The information is based on laboratory tests and a long practical experience. It is introductory and intended to help the user find the most suitable method of working. Since the user's production conditions are beyond our control, we cannot be held responsible for the results of the work which is affected by local circumstances. In each particular case testing and continuous control are recommended.

Date 2005-01-07	Replaces -	Reason for change: New
--------------------	---------------	---------------------------