

## Epoxy Adhesive for Wind Turbine Precast Segments

Two-component, high-thixotropy epoxy adhesive specially formulated for assembling precast concrete segments of onshore wind turbine towers. It provides excellent structural bonding under post-tensioning methods, ensuring long-term load transfer and durability.

### 1. Key Features

- High-thixotropy paste, easy mixing and application, no sagging or dripping.
- Excellent weather resistance, applicable in wet and low-temperature conditions.
- High strength, high modulus, low creep, waterproof and anti-corrosion.
- Strong bonding with concrete and steel, preventing reinforcement corrosion.
- Long open time for operation yet fast curing and rapid strength development.
- Safe and non-toxic, compliant with modern construction standards.

### 2. Technical Performance (per T/CECS 10080-2020)

Test Item	Requirement
Appearance	Similar to concrete color after curing
Sizing Time	≥ 20 min
Bonding Time	≥ 60 min
Anti-Sagging	≥ 10 mm
Extrudability	≥ 3000 mm <sup>2</sup> (150N)
Extrudability	≥ 7500 mm <sup>2</sup> (2000N)
Extrudability	≥ 10000 mm <sup>2</sup> (4000N)
Shrinkage	≤ 0.1 %
Thermal Deformation Temp.	≥ 50 °C
Water Absorption	≤ 0.5 %
Nonvolatile Content	≥ 99 %
Compressive Strength (12h)	≥ 20 MPa
Compressive Strength (24h)	≥ 60 MPa
Compressive Strength (7d)	≥ 80 MPa
Elastic Modulus (instant)	≥ 8000 MPa
Elastic Modulus (delayed 1h)	≥ 6000 MPa
Steel–Steel Tensile Shear Strength	≥ 17 MPa
Steel–Concrete Bond Strength	≥ 3.0 MPa (concrete failure)
Fatigue Resistance	≥ 2 million cycles without damage
Freeze-Thaw/Damp Heat/Acid/Alkali/Salt Resistance	Concrete failure only (no adhesive failure)
Long-Term Stress Resistance	No creep > 0.4 mm after 20 years equivalent test

### 3. Scope of Application

- Vertical joint splicing of precast prestressed wind turbine tower segments.
- Horizontal joint splicing of precast prestressed wind turbine tower segments.

### 4. Construction Method

- Preparation: Confirm dimensional tolerances, clean all surfaces, prepare adhesive and tools.

- Trial Assembly & Adjustment: Perform preliminary alignment, fine adjustment, control adhesive thickness.
- Mixing: Measure components A and B, mix in recommended ratio until uniform.
- Application: Apply adhesive evenly, complete assembly and tensioning within specified working time.

## 5. Packaging & Storage

Supplied in pre-measured kits (Part A + Part B). Store in dry, cool conditions, away from direct sunlight. Shelf life: 12 months in unopened containers.

## 6. About Us

Founded in 2008, Sino-Sina specializes in sealing, bonding, reinforcing, and protecting concrete structures. With more than 100 patents, participation in 50+ industry standards, and CNAS-accredited laboratories, Sino-Sina delivers certified, high-performance solutions for wind power, bridges, tunnels, and major infrastructure projects worldwide.