# **Product Manual**

Product Name: CBGM Antifreeze Type Wind Power Grout (Low-Temperature Series)

### **Product Description**

CBGM Antifreeze Type Wind Power Grout is specially designed for wind turbine foundations and structural grouting under extremely cold conditions (-15 °C to -20 °C). It offers high early strength, non-shrinkage with micro-expansion, excellent fluidity, and durability to ensure safe foundation bedding in frost-prone environments.

Performance Metrics (Typical Values, GB/T 50448-2015)

Item	Requirement
Flowability at -5 °C (mm) Initial	≥300
Flowability at -5 °C (mm) 30 min	≥260
Flowability at 8 °C (mm) Initial	≥300
Flowability at 8 °C (mm) 30 min	≥260
Compressive Strength (MPa) -1 d	≥20
Compressive Strength (MPa) -3 d	≥25
Compressive Strength (MPa) -7 d	≥40
Compressive Strength (MPa) -21 d	≥60
Compressive Strength (MPa) -28 d	≥90
Expansion Rate (%, 24 h)	0.02 - 0.40
Restrained Expansion (28 d dry curing)	≤0.02
Restrained Expansion (28 d water curing)	≤0.03

#### **Key Benefits**

- Reliable grouting under -15 °C to -20 °C conditions.
- High early compressive strength for fast installation.
- Micro-expansion and non-shrink performance for void-free bedding.
- Durable against frost, sulfate, and chloride exposure.
- Pumpable and pourable for efficient construction.

# Scope of Application

- Wind turbine foundation grouting in cold climate regions (down to -20 °C).
- Hoisting platforms, anchor bolt sleeves, and base plates in frost-prone environments.
- Onshore and offshore projects requiring antifreeze grout performance.
- Renewable energy infrastructure demanding durable, void-free bedding.

#### Packaging & Storage

- Packaging: 25 kg bags.
- Storage: Store in dry, ventilated warehouse, protected from moisture and freezing.

• Shelf life: 12 months.

## Disclaimer

All data are typical values tested under controlled conditions. Actual site performance may vary with environmental conditions and construction practices. Site trials are recommended before application.