ICC-ES Evaluation Report

ESR-5501

Reissued February 2026

Subject to renewal February 2027

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.

Copyright © 2026 ICC Evaluation Service, LLC. All rights reserved.

DIVISION: 03 00 00—CONCRETE Section: 03 20 00—Concrete Reinforcing Section: 03 21 00—Reinforcement Bars	REPORT HOLDER: DEXTRA BUILDING PRODUCTS (GUANGDONG) CO., LTD.	EVALUATION SUBJECT: DEXTRA DURABAR GFRP REBARS	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021, and 2018 *International Building Code*® (IBC)
- 2024, 2021, and 2018 *International Residential Code*® (IRC)

Properties evaluated:

- Crack Control
- Physical
- Mechanical

2.0 USES

The Dextra Durabar GFRP rebar is used as an alternative to the shrinkage and temperature reinforcement specified in Section 24.4 of ACI 318 for plain concrete footings and for plain concrete slabs (as defined by ACI 360) supported directly on the ground.

The Dextra Durabar GFRP rebar is also used as an alternative to horizontal temperature and shrinkage reinforcement in structural plain concrete walls covered in IBC Section 1901.2, IRC Sections R404.1.3 and R608.1, and ACI 332-20 Sections 9.2.1 and 9.2.7 (ACI 332-14 Sections 8.2.1 and 8.2.7), excluding walls where vertical reinforcement is required.

3.0 DESCRIPTION

The Dextra Durabar GFRP rebar is solid and has a circular cross section composed of glass fibers embedded in a resin matrix. Available bar size and properties are provided in Table 1 of this report.

4.0 INSTALLATION

The Dextra Durabar GFRP rebars must be installed in accordance with this report, applicable provisions in ACI SPEC-440.5-22, and Dextra Building Products (Guangdong) Co., Ltd's Handling and Safety Instructions.

5.0 CONDITIONS OF USE:

The Dextra Durabar GFRP rebar described in this report comply with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation of FRP bars used as temperature and shrinkage reinforcement for plain concrete footings, plain concrete slabs, and as horizontal reinforcement in plain concrete walls where vertical reinforcement is not required, must be in accordance with this evaluation report, and the report holder's Installation Manual. In case of conflict, this report governs.

5.2 Dextra Durabar GFRP rebars designations of M10 (No.3), as shown in Table 1 of this report, with a maximum spacing of 12 inches (300 mm) can be used as an alternative to conventional temperature and shrinkage reinforcement with maximum steel bar designations of M10 (No. 3) and minimum spacing of 12 inches (300 mm). Use of Dextra Durabar GFRP rebars at spacings greater than 12 inches (300 mm) is outside the scope of this evaluation report.

5.3 Complete construction documents, including plans showing compliance with the evaluation report, must be submitted to the code official for each project at the time of permit application. The construction documents must be prepared and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.4 Dextra Durabar GFRP rebars must be stored and protected during storage in accordance with the guidelines given in ACI SPEC-440.5-22.

5.5 Special inspection as required by Table 1705.3 of the 2024 and 2021 IBC (Section 1705.3 of the 2018 IBC) for steel-reinforced concrete construction is also applicable to FRP bar reinforced concrete construction under this report.

5.6 Use of FRP bars does not eliminate the requirement for joints specified in Section 14.3.4 of ACI 318 (IBC and IRC).

5.7 Dextra Durabar GFRP rebars are manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Fiber-reinforced Polymer (FRP) Bars and Meshes for Internal Reinforcement of Non-structural Concrete Members (AC521), dated October 2020 (Editorially revised April 2024), including fiber mass content, moisture absorption, shrinkage crack resistance, and quality control documentation.

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5501) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, the Dextra Durabar GFRP rebars are by packaging labeled with the company name (Dextra Building Products (Guangdong) Co., Ltd.) and contact information, product name, bar size, and lot number.

7.3 The report holder's contact information is the following:

DEXTRA BUILDING PRODUCTS (GUANGDONG) CO., LTD.
NO. 54 XINYAO BEI ROAD, XINTANG TOWN, ZENGCHENG
GUANGZHOU 511340
CHINA
+86 20 2261 9901
www.dextragroup.com

TABLE 1—DEXTRA DURABAR GFRP REBARS DIMENSIONS AND PROPERTIES

BAR DESIGNATION NUMBER	NOMINAL DIAMETER (in)	NOMINAL CROSS SECTIONAL AREA (in^2)	GUARANTEED ULTIMATE TENSILE FORCE (kip)	MEAN TENSILE MODULUS OF ELASTICITY (ksi)	MEAN ULTIMATE TENSILE STRAIN (%)	GUARANTEED TRANSVERSE SHEAR STRENGTH (ksi)	GUARANTEED BOND STRENGTH (ksi)
M10 (No. 3)	$^3/_8$	0.110	17.39	7,899	2.37	23.94	3.55

For **SI** Units: 1 inch = 25.4 mm; 1 kip = 4.448 kN; 1 ksi = 6.895 MPa