

## TEST CERTIFICATE: MAN209229

**SGS UGANDA LIMITED F327001**  
2ND FLOOR MEDIA PLAZA PLOT 78  
KIRA ROAD KAMWOKYA  
KAMPALA, UGANDA  
P.O.BOX 63

**Order Number:** Joseph Elimu

**Customer:** Phoenix TTC U LTD. MRG-Composites

**Item/Product:** 6mm, 7mm, 8mm and 12mm diameter FRP bars.

**Additional Information:**

**Test Specification:** ISO 10406-1

### TENSILE TO ISO 10406-1

Identity	Location / Direction	Size (mm)	XS Area (mm <sup>2</sup> )	Yield Strength (MPa)	Tensile Strength (MPa)	Gauge Length (mm)	% Elong	% R.A.
1	Longitudinal	6	23.76		1208			
2	Longitudinal	6	23.76		1136			
3	Longitudinal	6	23.76		1300			

6mm bars, nominal cross sectional area = 23.76 mm<sup>2</sup>  
Youngs modulus = 54 Gpa

### TENSILE TO ISO 10406-1

Identity	Location / Direction	Size (mm)	XS Area (mm <sup>2</sup> )	Yield Strength (MPa)	Tensile Strength (MPa)	Gauge Length (mm)	% Elong	% R.A.
1	Longitudinal	7	29.23		1262			
2	Longitudinal	7	29.23		1170			
3	Longitudinal	7	29.23		1214			

7mm bars, nominal cross sectional area = 29.23 mm<sup>2</sup>  
Youngs modulus = 59GPa

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### TENSILE TO ISO 10406-1

Identity	Location / Direction	Size (mm)	XS Area (mm <sup>2</sup> )	Yield Strength (MPa)	Tensile Strength (MPa)	Gauge Length (mm)	% Elong	% R.A.
1	Longitudinal	8	39.6		1230			
2	Longitudinal	8	39.6		1222			
3	Longitudinal	8	39.6		1275			

8mm bars, nominal cross sectional area = 39.60 mm<sup>2</sup>  
Youngs modulus = 60GPa

### TENSILE TO ISO 10406-1

Identity	Location / Direction	Size (mm)	XS Area (mm <sup>2</sup> )	Yield Strength (MPa)	Tensile Strength (MPa)	Gauge Length (mm)	% Elong	% R.A.
1	Longitudinal	12	86.6		1127			
2	Longitudinal	12	86.6		1197			
3	Longitudinal	12	86.6		1201			

12mm bars, nominal cross sectional area = 86.60 mm<sup>2</sup>  
Youngs modulus = 62GPa

Tested By: SGS MIS Manchester

*This document has been electronically authorised by*



John Wallace  
Group Operations Manager  
For and on authority of  
SGS MIS Testing Ltd.

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