



SICUT™

SUSTAINABLE | COMPOSITE | STRUCTURAL

Sicut Composite Railway Sleeper

Manufactured in the UK using the proven Rutgers Technologies

Mechanical Properties Data Sheet

Property	Sicut Composite Sleeper Properties ¹	AREMA Chapter 30 part 5: 2016 Required Properties
Specific Gravity	0.80-0.90	N/A
Modulus of Elasticity	> 2,500 MPa	> 1,170 MPa
Modulus of Rupture	> 30 MPa	> 13.8 MPa
Rail Seat Compression (deformation under load)	< 4mm at 100 kips < 1mm after one minute	< 6.35mm at 100 kips < 3.175mm after one minute
Lateral Resistance after 100,000 gross tons of traffic	> 11.7kN	> 11.1kN
Screw Spike Pullout Resistance	> 50 kN (Ss8 150 Screw Spike)	> 22.2kN
Coefficient of Thermal Expansion	0.74 x 10 ⁻⁴ cm/cm/°C	< 1.35 x 10 ⁻⁴ cm/cm/°C
Electrical Impedance	2.48 MΩs after 6-hour soak	> 0.02 MΩs

Independent testing laboratories include:

Société Nationale des Chemins de fer Français (SNCF)	Technische Universität München (DB)	Rutgers University
U.S. Army Corps of Engineers (USACE)	Chicago Transit Authority (CTA)	London Underground
Transportation Technology Center, Inc. (TTCI)	Metropolitano di Milano	CTL Group

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¹ Published mechanical properties are correct as at 01 June 2017 but are subject to change at the discretion of Sicut Enterprises Limited