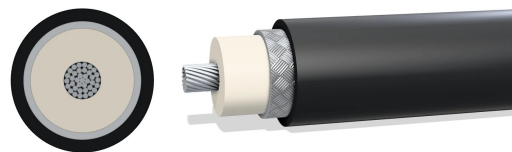


Application

RG58 C/U is the classic thin 50 Ω coaxial cable and probably the most widespread RF cable in the world. It is the workhorse for lower-power, lower-frequency transmit/receive work: amateur and CB radio, hand-portable and mobile radio wiring, laboratory and test set-ups, antenna patch leads, test leads and the internal wiring of RF modules and instruments. The 'C/U' suffix denotes the build to the US military specification MIL-C-17 (MIL-DTL-17). It has a fine-stranded tinned-copper centre conductor (19 × 0.18 mm, about 0.9 mm, 20 AWG) that keeps the cable flexible, a solid polyethylene (PE) dielectric of about 2.95 mm, a single tinned-copper braid of about 95 % coverage and a black PVC jacket of about 5 mm; a low-smoke halogen-free (LSZH) jacket is available for higher fire requirements. Where compactness and flexibility matter and power and length stay modest, RG58 is the obvious choice; once loss or transmitted power becomes critical a heavier 50 Ω cable such as RG213 or RG214 is the next step.



CONSTRUCTION

Centre conductor	Stranded tinned copper, 19 × 0.18 mm (nominal 0.9 mm, 20 AWG). A solid-copper centre exists on the plain RG58/U and RG58A/U variants - not this C/U build.
Dielectric	Solid polyethylene (PE), nominal 2.95 mm over the dielectric.
Screen (braid)	Single tinned-copper wire braid, approximately 95 % coverage (sources range 91-96 %).
Outer jacket	Polyvinyl chloride (PVC), black, flame-retardant to IEC/EN 60332-1-2; a low-smoke halogen-free (LSZH) jacket is available as a variant.
Nominal outer diameter	approximately 4.95-5.0 mm (LSZH slightly larger).
Colour	Jacket black as standard (PVC); other colours to order.

ELECTRICAL & TRANSMISSION PROPERTIES

Characteristic impedance	50 Ω (nominal, ±2).
Centre conductor	19 × 0.18 mm (nominal 0.9 mm, 20 AWG) stranded tinned copper.
Dielectric	Solid polyethylene (PE), nominal 2.95 mm.
Screen / coverage	Single tinned-copper braid, approximately 95 % coverage.
Nominal capacitance	approximately 100 pF/m (98-101 pF/m).
Velocity of propagation	approximately 66 %.
Attenuation (indicative)	approximately 10 dB/100 m @ 50 MHz; approximately 15-16 dB/100 m @ 100 MHz; approximately 20-24 dB/100 m @ 200 MHz; approximately 45-56 dB/100 m @ 860-900 MHz (PE reference; indicative, worst-case at the top end).
Max. operating voltage	approximately 1400 V rms (MIL-C-17 rating; individual makes state up to ~1900 V rms).
Reaction to fire (CPR)	Eca for the PVC build (EN 50575); the LSZH variant reaches a higher class on request.
Temperature range	Operating -20 to +70 °C (safe merged range; PVC builds are commonly rated -40 to +85 °C).
Min. bending radius	approximately 10 × outer diameter (approximately 50 mm); ~25 mm for a single bend.

KEY FIGURES

Nominal outer diameter	approx. 4.95-5.0 mm
Nominal weight	approx. 37 kg/km (PVC); LSZH variant approx. 46 kg/km
Centre conductor	19 × 0.18 mm (~0.9 mm) stranded tinned copper
Max. conductor resistance	approximately 39 Ω/km (inner conductor).

Green code CU/PE/TCWB/PVC: stranded tinned-copper centre - solid PE dielectric - tinned copper wire braid (TCWB) - PVC jacket. Impedance, capacitance, velocity, attenuation, outer diameter and weight are nominal/indicative values consolidated from several manufacturer references; the safest (narrowest temperature, largest bending radius) values were taken where sources differ. All values are indicative and non-binding.