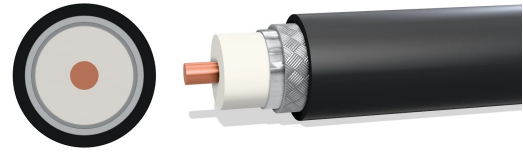


## Application

RG6 is a 75  $\Omega$  broadcast and distribution coaxial cable for terrestrial and satellite television, cable-TV (CATV) networks, terrestrial antenna down-leads and CCTV/video signal runs. It carries a single centre conductor of 18 AWG (nominal 1.02 mm) - solid bare copper in the broadcast/precision grade shown here, with a copper-clad-steel (CCS) variant common in mass-market CATV - surrounded by a low-loss foam polyethylene (foam-PE / FPE) dielectric of about 4.6 mm. The screen is a bonded aluminium/polyester (tri-laminate) foil at approximately 100 % coverage combined with a tinned copper wire braid of at least 95 %, giving the low return loss and high screening effectiveness needed for digital cable, DVB-T/T2 and DVB-S/S2 signals up to about 2 150 MHz (and higher on precision types). The outer jacket is PVC as standard, with a low-smoke halogen-free (LSZH) version available for indoor and public-building routes. Dual- and quad-shield constructions (foil+braid+foil+braid) are offered where higher class-A/A+ screening to EN 50117 is required; this sheet describes the mainstream single foil + braid build.



## CONSTRUCTION

|                         |                                                                                                                                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Centre conductor</b> | Solid bare copper, 18 AWG (nominal 1.02 mm). A copper-clad-steel (CCS) centre of the same 1.02 mm diameter is a common mass-market CATV alternative.                                                 |
| <b>Dielectric</b>       | Foam polyethylene (foam-PE / FPE), nominal 4.6 mm over the dielectric - low-loss, high-velocity insulation.                                                                                          |
| <b>Screen (foil)</b>    | Bonded aluminium/polyester tri-laminate foil (aluminium-polyester-aluminium), approximately 100 % coverage.                                                                                          |
| <b>Screen (braid)</b>   | Tinned copper wire braid over the foil, at least 95 % coverage. Mass-market CATV types may use a copper-clad-aluminium (CCA) braid; quad-shield (foil+braid+foil+braid) is available for class-A/A+. |
| <b>Outer jacket</b>     | Polyvinyl chloride (PVC), flame-retardant to IEC/EN 60332-1-2; a low-smoke halogen-free (LSZH) jacket is available as a variant.                                                                     |
| <b>Colour</b>           | Jacket typically white or black (PVC); other colours to order.                                                                                                                                       |

## ELECTRICAL & TRANSMISSION PROPERTIES

|                                 |                                                                                                                                                                                        |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Characteristic impedance</b> | 75 $\Omega$ (nominal).                                                                                                                                                                 |
| <b>Centre conductor</b>         | 18 AWG (nominal 1.02 mm), solid bare copper (CCS variant available).                                                                                                                   |
| <b>Dielectric</b>               | Foam polyethylene (foam-PE), nominal 4.6 mm over the dielectric.                                                                                                                       |
| <b>Screen / coverage</b>        | Aluminium/polyester tri-laminate foil (approximately 100 %) plus tinned copper wire braid (at least 95 %).                                                                             |
| <b>Nominal capacitance</b>      | approximately 53 pF/m.                                                                                                                                                                 |
| <b>Velocity of propagation</b>  | approximately 82 % (up to about 85 % on foam-PE types).                                                                                                                                |
| <b>Attenuation (indicative)</b> | approximately 6.4 dB/100 m @ 100 MHz; approximately 19 dB/100 m @ 862 MHz; approximately 21 dB/100 m @ 1000 MHz; approximately 31 dB/100 m @ 2150 MHz (foam-PE reference; indicative). |
| <b>Screening class</b>          | Foil + braid to EN 50117-1; dual/quad-shield builds reach class A / A+ screening attenuation per EN 50117.                                                                             |
| <b>Reaction to fire (CPR)</b>   | Eca as standard (EN 50575); LSZH (Dca/B2ca) on request.                                                                                                                                |
| <b>Temperature range</b>        | Operating -20 to +70 °C (precision types rated to -30 to +75 °C).                                                                                                                      |
| <b>Min. bending radius</b>      | approximately 10 $\times$ outer diameter (approximately 70 mm).                                                                                                                        |

## KEY FIGURES

|                               |                                                                 |
|-------------------------------|-----------------------------------------------------------------|
| <b>Nominal outer diameter</b> | approx. 6.9 mm (range 6.6-7.0 mm)                               |
| <b>Nominal weight</b>         | approx. 55 kg/km solid copper (CCS variant approx. 37-53 kg/km) |
| <b>Centre conductor</b>       | 18 AWG (1.02 mm) solid bare copper                              |

Green code CU/PE/CAM/TCWB/PVC: solid bare copper centre - foam-PE dielectric - aluminium/polyester foil (CAM) - tinned copper wire braid (TCWB) - PVC jacket. Outer diameter, weight, capacitance, velocity and attenuation are nominal/indicative values of the broadcast/precision manufacturer references (foam-PE, solid copper); a CCS-centre / CCA-braid mass-market CATV variant exists with slightly different weight and attenuation. All values are indicative and non-binding.