HOORVIA ? WIRE GAUGE CONVERSION (AWG TO MM)

Quick Reference Cheat Sheet · US Letter & A4 Printable

Crafting & DIY · Sheet #1081

Conductor Size (Copper)	60°C Ampacity (NM-B / Romex)	75°C Ampacity (THHN Conduit)	90°C Ampacity (Derating Only)	Max Breaker / OCPD (NEC 240.4(D))	80% Max Continuous Load (NEC 210.20)	Permitted Residential / Commercial Applications
14 AWG Copper (2.08 mm²)	15 Amps	20 Amps	25 Amps	15A Max Breaker (NEC 240.4(D))	12.0 Amps (1,440 Watts at 120 VAC)	General lighting branch circuits, 15A bedroom & living room convenience receptacles
12 AWG Copper (3.31 mm²)	20 Amps	25 Amps	30 Amps	20A Max Breaker (NEC 240.4(D))	16.0 Amps (1,920 Watts at 120 VAC)	Kitchen small appliance circuits (NEC 210.52(B)), bathrooms, laundry rooms, outdoor GFCI
10 AWG Copper (5.26 mm²)	30 Amps	35 Amps	40 Amps	30A Max Breaker (NEC 240.4(D))	24.0 Amps (5,760 Watts at 240 VAC)	Electric clothes dryers (NEC 220.54), 30A residential electric water heaters, 30A RV receptacles
8 AWG Copper (8.37 mm²)	40 Amps	50 Amps	55 Amps	40A (60°C) / 50A (75°C)	32.0 Amps (60°C) / 40.0 Amps (75°C)	Electric cooking ranges (up to 8.75 kW), central heat pump compressor units, 40A subpanels
6 AWG Copper (13.30 mm²)	55 Amps	65 Amps	75 Amps	55A (60°C) / 60A standard OCPD (75°C)	44.0 Amps (60°C) / 48.0 Amps (75°C, 11.52 kW)	EV Level 2 chargers (48A continuous charge requires 60A breaker per NEC 625.42), subpanel feeders
4 AWG Copper (21.15 mm²)	70 Amps	85 Amps	95 Amps	70A (60°C) / 85A standard (75°C)	56.0 Amps (60°C) / 68.0 Amps (75°C)	100A residential subpanel feeders (75°C rated lugs), multi-circuit electric tankless heaters
2 AWG Copper (33.62 mm²)	95 Amps	115 Amps	130 Amps	95A (60°C) / 100A?115A (75°C)	76.0 Amps (60°C) / 92.0 Amps (75°C)	100A residential main service entrance conductors (NEC 310.12), heavy workshop subpanels