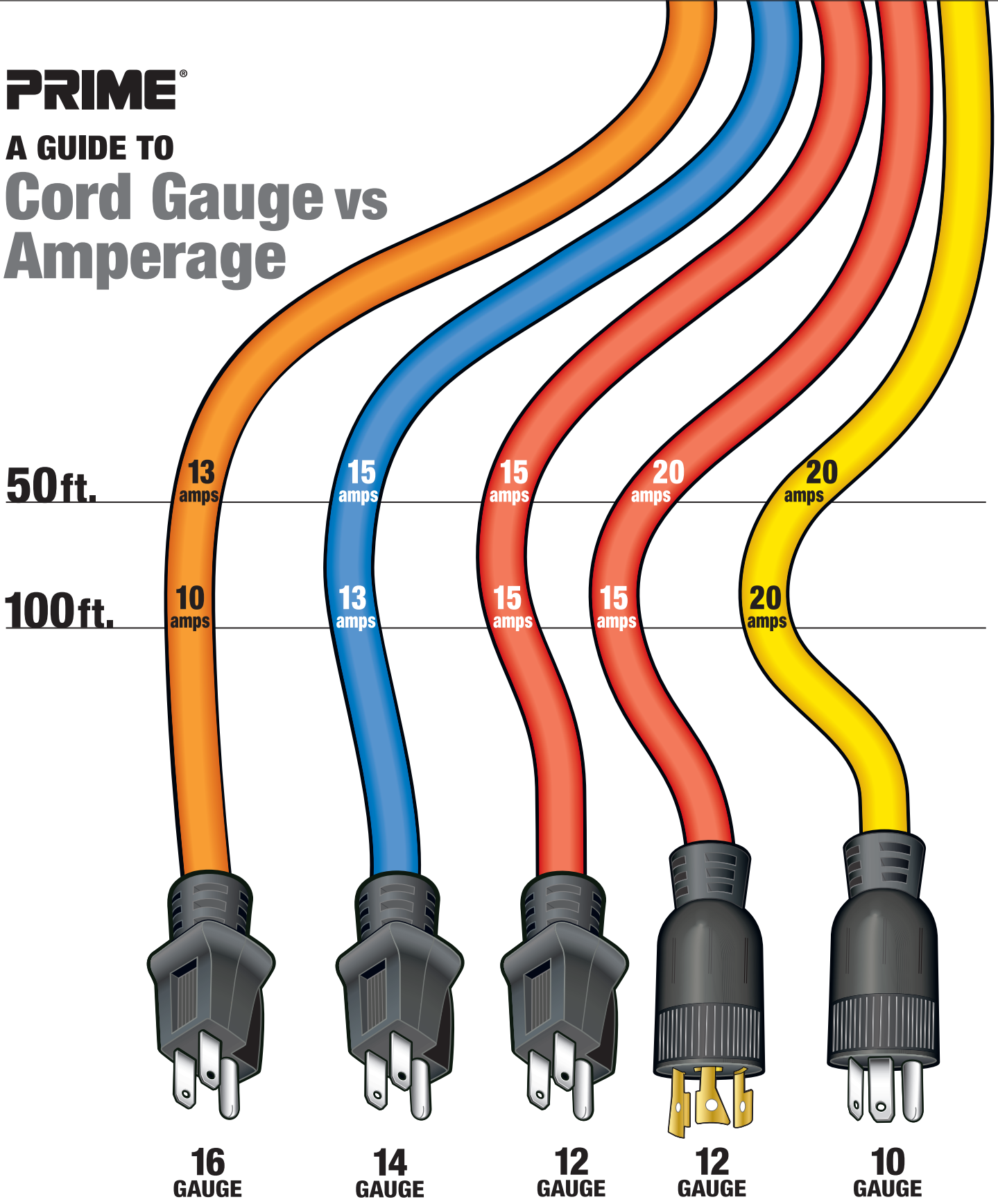
PRIME®

A GUIDE TO

Cord Gauge vs Amperage

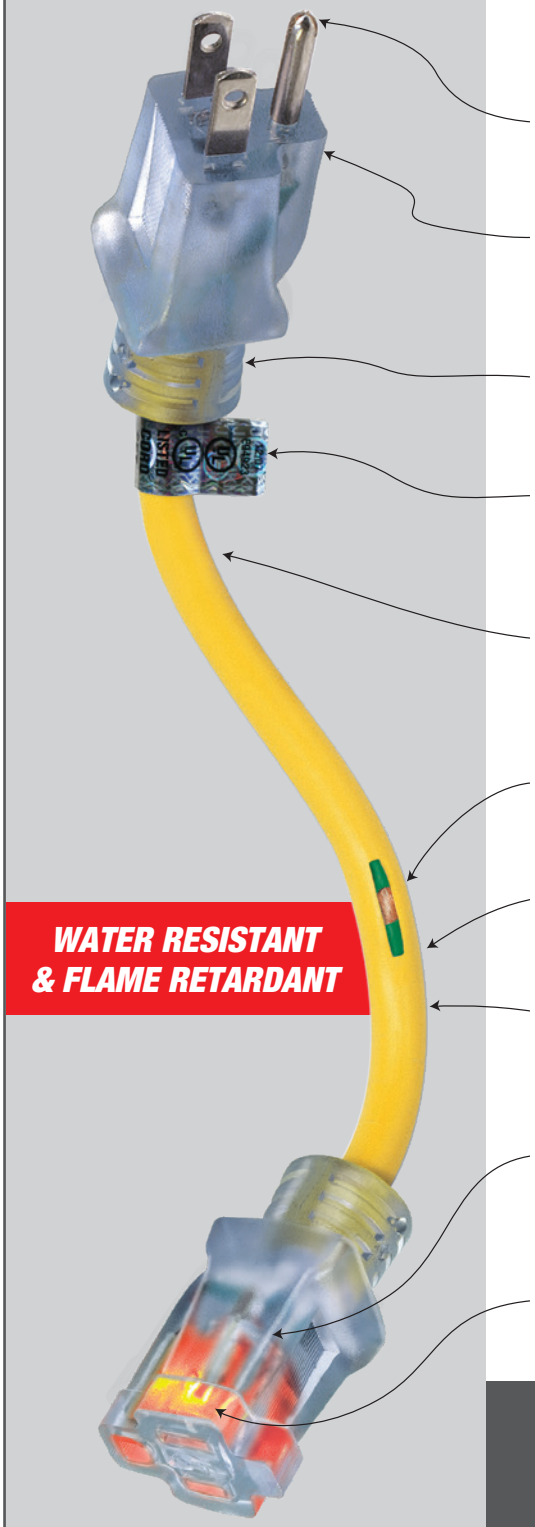


	MEDIUM DUTY	HEAVY DUTY	EXTRA HEAVY DUTY	ULTRA HEAVY DUTY
TYPICAL USAGE GUIDE	Lawnmowers	Drills	Circular Saws	Generators
	Hedge Trimmers	Belt Sanders	Chain Saws	Recipro Saws
	Fans	Routers	Worm Drives	Rotary Hammers
	Household Tools	Table Saws	Grinders	Compressors

www.primewirecable.com

PRIME®
Wire and Cable

Ten Quality Reasons to Buy Prime



WATER RESISTANT & FLAME RETARDANT

Prime's Quality Design and Manufacturing Solves Your Extension Cord Problems!

1. Nickel-Coated Brass Blades

Prime's full-sized, full-contact nickel-coated 100% brass blades are designed to resist corrosion which prevents arcing, and won't break off or pull out, making them the safest blades possible.

2. Oversized Plugs & Connectors Won't Deform or Shatter

Made from a special virgin compound that will not harden, become brittle or shatter, Prime's exclusively designed oversized plugs and connectors are made to withstand the rigors and abuse of even the most demanding jobsites.

3. Oversized Strain Relief Prevents Plugs from Separating from the Wire

Built to exceed UL's most stringent safety test requirements, Prime's large, flexible, ribbed strain relief was engineered to prevent the wire from pulling out of the plug, even in the most extreme conditions.

4. Dual Safety Listings for Added Confidence

In addition to meeting or exceeding all OSHA requirements, Prime's cords are tested and listed by UL, CSA and/or ETL to meet the safety standards in both the United States and Canada. Prime has cords made for use in extreme environments as well as for standard indoor and outdoor applications.

5. 100% Electrical Testing Ensures Safety

Prime conducts over 50 seperate safety tests on each cord including continuity, short-circuit, polarity and electrical breakdown (dielectric voltage) to ensure that each cord performs up to UL requirements and is also the safest cord on the market.

6. Non-Stop Electrical Performance

Made from precisely drawn and bunched 100% pure copper wire, Prime's full-sized conductors resist electrical failure, even under the hardest use.

7. Superior Flexibility and Abrasion Resistance

Prime's cord jacket compound is precisely formulated to provide maximum flexibility while maintaining superior resistance to abuse and abrasion.

8. Water Resistant & Flame Retardant Cord

Prime's cords are water resistant and will help prevent moisture failure for safety and long life. Standard vinyl and TPE rubber cords will quickly burn end-to-end. Prime's cords are flame retardant and will extinguish the flame, providing added safety.

9. Arc-Resistant Female Connectors

As tools are plugged in and out of the female plug, a small arc can slowly eat away at the metal contacts in the plug. Prime suppresses this problem by using arc-resistant full-sized contacts and precise contact alignment.

10. Primelight®

Primelight® power indicator light lets you see when the power is ON.

Industrial Products Division
Toll Free (888) 445-9955 • Fax (800) 797-2226

Retail Products Division
Toll Free (888) 445-9955 • Fax (909) 859-2926

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Insulation and Jacket Properties

Typical Properties of Common Insulating Materials

PARAMETER	PVC	PE	XLPE	NYLON	FEP	TPE	BUTYL RUBBER	SILICONE RUBBER
Specific Gravity	1.37	0.92	0.93-1.18	1.09	2.16	2.17	1.40	1.24
Dielectric Constant								
(a) 60 Hz	6.0	2.26	3.0	4.6	2.15	2.1	4.1	3.3
(b) 1000 Hz	5.0	2.26	3.0	4.5	2.15	2.1	4.0	3.1
Dielectric Strength v/mil								
(a) 0.010" wall	1800	2100	—	1000	2000	2000	700	600
(b) 0.040" wall	800	1050	700	470	950	950	500	400
Tensile Strength, PSI x 1000	1.5-3.8	1.4-2.4	1.8-2.5	8.8-11.9	2.3-3.1	2.0-6.0	0.5-1.5	0.6-1.2
Service Temp. Range °C	-55/+105	-90/+90	-80/+75	-55/+105	-90/+200	-90/+260	-40/+90	-80/+200
Elongation, %	200-375	350-550	250-400	150-380	200-330	200-500	200-400	125-400
Water Absorption, % in 24 hrs.	0.75	0.02	0.01	2.5	0.01	0.01	<1.0	<1.0
Flame Resistance	Self-Extinguishing	Supports Flame	Slow Burning	Self-Extinguishing	Non-Flammable	Non-Flammable	Slow Burning	Slow (Non-Cond. Ash)
Ozone Resistance	Excellent	Good	Good	Good	Excellent	Excellent	Excellent	Excellent
Flexibility	Good	Good	Good-Fair	Good-Fair	Good	Good	Excellent	Excellent
Abrasion Resistance	Good	Good	Excellent	Excellent	Excellent	Excellent	Poor	Poor
Acid Resistance	Excellent	Excellent	Excellent	Poor	Excellent	Excellent	Good	Poor
Base Resistance	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Good
Hydrolic Fluid Resistance	Good-Fair	Fair-Poor	Good-Fair	Good-Fair	Excellent	Excellent	Poor	Fair-Poor
Organic Solvent Resistance	Fair-Poor	Poor	Fair	Good-Fair	Excellent	Excellent	Good-Fair	Poor

Note: The above is representative of performance. For specific compound performance, consult factory.

Typical Properties of Common Jacketing Materials

PARAMETER	PVC	PE	NYLON	FEP	TPE	SILICONE RUBBER	NEOPRENE
Specific Gravity	1.37	0.92	1.09	2.16	2.17	1.24	1.52
Tensile Strength PSI x 1000	1.5	1.4-2.4	8.8-11.9	2.3-3.1	2.0-6.0	0.6-1.2	2.5-4.0
Elongation, %	200-375	350-550	150-380	200-330	200-500	125-400	300-500
Service Temp. Range °C	-55/+105	-80/+75	-55/+105	-90/+200	-90/+200	-80/+200	-65/+90
Ozone Resistance	Excellent	Good	Good	Excellent	Excellent	Excellent	Excellent
Weatherability	Good-Fair	Excellent-Good	Fair-Poor	Excellent	Excellent	Excellent	Good
Flame Resistance	Self-Extinguishing	Supports Flame	Flammable	Non-Flammable	Non-Flammable	Slow-Burn (Non-Cond. Ash)	Self-Extinguishing
Flexibility	Good	Good	Good-Fair	Good	Good	Excellent	Excellent
Abrasion Resistance	Good	Good	Excellent	Excellent	Excellent	Poor	Excellent
Acid Resistance	Excellent	Excellent	Poor	Excellent	Excellent	Poor	Good
Base Resistance	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Good
Hydrolic Fluid Resistance	Good-Fair	Fair-Poor	Good-Fair	Excellent	Excellent	Fair-Poor	Good
Organic Solvent Resistance	Fair-Poor	Poor	Good-Fair	Excellent	Excellent	Poor	Good
Resistance to Tearing	Good	Good	Excellent	Good	good	Fair	Good

Note: The above is representative of performance. For specific compound performance, consult factory.

TECHNICAL INFORMATION

What Do PRIME® Extension Cord Rating Designations Mean?

Indented on each PRIME® cord is a letter designation that defines the type and approved use of the cord. You will see that each PRIME® extension cord carries one of the the following designations.

PRIME OUTDOOR VINYL EXTENSION CORDS

SJTW (UL) Water Resistant or c(UL) SJTW FT2
STW (UL) Water Resistant or c(UL) STW FT2

PRIME ALL-WEATHER TPE-RUBBER EXTENSION CORDS

SJEOW (UL) Water Resistant or c(UL) SJEOW FT2
SEOW (UL) Water Resistant or c(UL) SEOW FT2

PRIME RUBBER EXTENSION CORDS

SJ (UL) Water Resistant or c(UL) SJ FT2
SJO (UL) Water Resistant or c(UL) SJO FT2
SJOW (UL) Water Resistant or c(UL) SJOW FT2
SO (UL) Water Resistant or c(UL) SO FT2
SOO (UL) Water Resistant or c(UL) SOO FT2
SOOW (UL) Water Resistant or c(UL) SOOW FT2

S – The "S" at the beginning of all designations state that the cord is Hard Service flexible cord for general use.

P – Parallel construction, usually uninsulated and used in products such as household extension cords, air conditioner cords and low voltage landscape cable.

J – The "J" after the "S" defines the jacket of the cord as being the standard 300 volt insulation type currently used on most extension cords. The absence of the "J" defines the cord jacket as an *extra hard service 600 volt* insulation type defined by PRIME® as our "Double Jacket" cord because the outer cord jacket is roughly twice the thickness of the "J" jacket that is normally used in outdoor extension cords.

V – Vacuum wire, softer and more flexible than standard SJT, usually found on retractable cord reels and vacuum cleaner power supply and extension cords because it holds up to constant winding and unwinding but still maintains its shape.

T or E – This letter defines the material the insulation and jacket are made from. "T" defines the insulating material as PVC (vinyl) thermoplastic. The letter "E" defines the insulation and jacket material as TPE–thermoplastic elastomer rubber.

O – The letter "O" defines the cord as being Oil Resistant. This was especially designed because most rubber type cords would break down and lose insulating performance when exposed to oil or grease.

W – This letter designates that the cord has been rated for outdoor use. As part of this rating, the different insulation and jacket compounds must meet the following use temperature ranges. UL sets a use temperature range of the "T" PVC vinyl material at -31°F to +140°F (-35°C to +60°C). PRIME® has formulated the PVC vinyl compound in our products to exceed this nominal range by approximately 5°F. UL sets a use temperature range of the "E" TPE-rubber material at -58°F to +221°F (-50°C to +105°C). PRIME® has also exceeded this range by approximately 12°F.

(UL) – This defines the cord as being Underwriters Laboratories listed. UL allows the use of the logo in parenthesis rather than a complete circle on round product, like a cord.

Water Resistant – Most of Prime's outdoor cords are now made with water resistant material. Standard vinyl and TPE-rubber cords have a tendency to absorb water if left laying in a puddle on the job site. When water comes in contact with the copper wire it starts to corrode. If the water remains in the cord it could build up until a shock path is created. When water gets in a cord its life is shortened.

CSA – Defines the product as meeting Canadian Standards Association requirements. The CSA logo is usually not abbreviated.

c(UL) & c CSA us – Since the NAFTA agreement with Canada, UL and the Canadian Standards Association, CSA, have worked together to allow CSA to list products for the USA and for UL to list products for use in Canada. The c(UL) designation says the product was tested and certified by UL to Canadian Standards and the c CSA us mark signifies that CSA tested the product and certifies it to the UL Standards.

FT2 – This letter group defines the product as being flame retardant. If a standard vinyl or TPE-rubber cord catches on fire, the flame can quickly burn the entire length of the cord. The PRIME® jacket insulation material will prevent the spread of combustion along the cord. The cord will extinguish the flame within 30 seconds of the heat source being removed.

CL2 – Or "class 2" is a UL rating for wire that can be used for in-wall construction. Usually applies to communication cable or speaker wire.

SRDT – Is heavy duty wire made specifically for use with higher amperage equipment such as ranges, dryers and mobile home power hook-up cords. Not very flexible.

HPN – Is high-heat parallel neoprene wire made specifically for use with clothes irons, portable heaters and other such applications where high temperatures of the appliance could affect the power cord's performance.