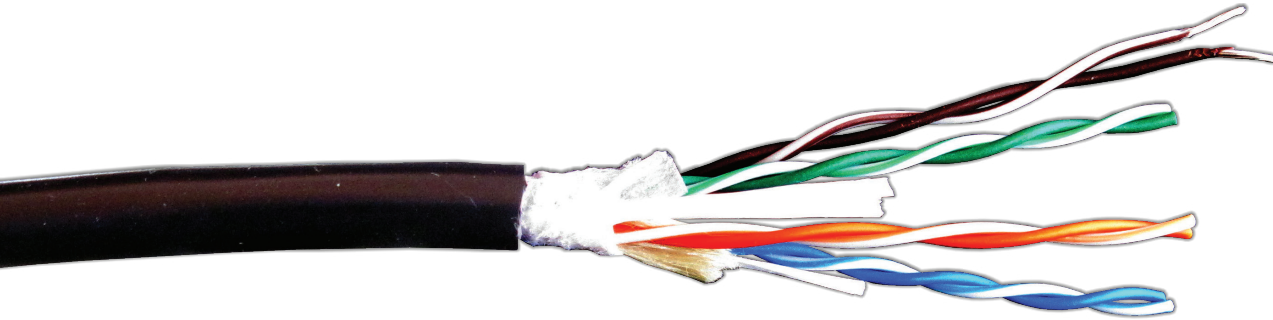


## The World's Most Durable Ethernet Cables



Ethernet patch cables designed to withstand the extreme conditions of the real world. Available as fully assembled patch cables, in standard and custom lengths, with your choice of three heavy-duty RJ-45 connector formats. Panel-mount connectors also available for a complete OEM Ethernet wiring solution.

### General Information

A 4 pair, 24 AWG, 100 Ohm U/UTP round cable, designed to the IEC 61156-6 and TIA/EIA 568-B.2 CAT5 requirements. The cable contains 4 twisted pairs, cabled, assembled with kevlar reinforcement strands, jacketed in Black UV resistant Polyurethane.

### General Specifications

Part Number	PCCAT5EUTPP
Conductors	24 AWG [0.25 mm <sup>2</sup> ] tinned copper, 7x0.20 mm
Insulation	Solid PO, Nom. Nom. Dia. 0.038" [0.97 mm]
Color Code	Color coded 568-B
Assembly	Pairs cabled with Kevlar strength members and separation tape wrapped.
Shields	None
Jacket	Black, special PUR compound.
Marking	ProPlex PCAT5EUTPP 24AWG UTP 100MHZ data cable CAT5E verified
Weight	30 lbs./mft [44 Kg/Km]
Outside Diameter	0.244" [6.2 mm] nom. +/-0.012" [0.3 mm]
Minimum Bend Radius	45 mm
Tensile Strength	270 kg
Operational Pulling Tension	20 kg max. (@0.3% Elongation)
Temperature Rating	Installation: -5° to +60° C Operational: -25° to +70°C
Compliance	RoHS

### Electrical Specifications

Voltage Rating	230 VMS
Velocity of Propagation	68% nom.
Impedance	100 +/- 15 Ohm 1-100 MHz
Propogation Delay	570ns/100m max @ 1 MHz 545ns/100m max @ 10 MHz 537ns/100m max @ 100 MHz
Delay Skew	35 ns/100 m max @ 1-100 MHz
Dielectric Strength	VAC/1min - 700V/min
Capacitance	pair 46 pF/m
Resistance Unbalance	2% max @ 20 deg. C
Capacitance Unbalance	3.2 pF/m max. @1KHz (wire to ground)
Insulation Resistance	5000 M Ohm / Km Min.
Return Loss (100MHz)	20 db/100 m min. @ 1 MHz 25 db/100 m min. @ 16 MHz 20.7 db/100 m min. @ 62.5 MHz 19 db/100 m min. @ 100 MHz
DC Resistance	96 Ohm/Km @ 20 deg. C
PoE Compatibility	Yes

### Reeling Capability

In the core level, under the shields, are 4 conductor pairs and 6 strength members, 3 white and 3 yellow. Two central strength members perform a "tension relief" function. The other 4 are twisted around the pairs, each pair is wrapped in a strength member to perform a "pair structure holding" function. The reason for two types of strength members is that each one has a different prolongation constant – one positive, the other negative – so on average the length of the strength members remains constant and equal to the wire length.

To install on a reel, please use the following guidelines:

- Minimum reel core diameter is 10 cm.
- Minimum tension to be used during reeling and unreeling process.
- Terminate the cable with plugs before reeling is initiated.
- Cable length per reel is 90 meters or less.

### Transmission Performance

	1 MHz	4 MHz	10 MHz	16 MHz	20 MHz	31.25 MHz	62.5 MHz	100 MHz
Attenuation db/100m nom.	2.5	4.9	7.8	9.9	11.1	14.1	20.4	26.4
N.E.X.T (Near-End Crosstalk Loss) db min.	65	56	50	47	46	43	38	35

**ProPlex CAT5e Ethernet cables meet attenuation specs up to 85m (275 ft); meets all other performance specs up to 100m (328 ft)**

### PUR Jacket Properties

#### Jacket Compound Specification

Halogen Free Flame Retardant Polyether-based Polyurethane, Glossy finish. Excellent Hydrolysis resistance. High microbial resistance. UV resistant. High flexibility.

### Jacket Testing Results

Test	Test Method	Result
Density	DIN 53479	1.15g/cubic cm
Tensile strength	DIN 53504	40 nom. N/sqmm
Tensile strength after 42 days, H2O 80°C	DIN 53504	30 N/sqmm
Ultimate elongation	DIN 53504	550 nom. % min.
20% modulus	DIN 53504	3.2 N/sqmm
100% modulus	DIN 53504	5.5 N/sqmm
300% modulus	DIN 53504	12 N/sqmm
Tear strength	DIN 53515	60 N/mm
Hardness shore A	DIN 53505	87
Hardness shore D	DIN 53505	36
Melt index- MVR	ISO 1133	30-60 cubic cm/10 min
Brittle point	DIN 53513	-45°C
Abrasion Loss	DIN 53516	40 cubic mm
Compression set (23°C) 70h	DIN 53517	30%
Compression set (70°C) 24h	DIN 53517	50%

### PUR Jacket Chemical Resistance Chart

Organic Substances				Inorganic Substances			
Medium	Temperature	Concentration	Reaction	Medium	Temperature	Concentration	Reaction
Acetic Acid	Room Temp	20%	slight	Acetic Acid	Room Temp	20%	nil to slight
Acetone	Room Temp	40%	poor	Acetic Acid 3N	Room Temp		poor
Astm Fuel A	Room Temp	4%	nil	Aluminum Chloride, Aqu.	Room Temp	5%	nil
Astm Fuel B	Room Temp	10%	nil	Ammonia, Aqu.	Room Temp	10%	nil
Astm Fuel C	Room Temp	18%	nil to slight	Aniline	Room Temp		no resistance
Astm Oil 1	80°C		nil	Barium Salts	Room Temp	cold saturated	nil to slight
Astm Oil 2	80°C	3%	nil	Boric Acid	Room Temp	100%	nil to slight
Astm Oil 3	80°C	6%	nil	Calcium Chloride	Room Temp	cold saturated	nil to slight
Benzene	Room Temp		poor	Calcium Nitrate	Room Temp	cold saturated	nil to slight
Butanol	Room Temp		poor	Chromium Salts, Aqu.	Room Temp	cold saturated	nil to slight
Butyl Acetate	Room Temp	40%	poor	Copper Salts, Aqu.	Room Temp	cold saturated	nil to slight
Citric Acid	Room Temp		slight	Fe Chloride, Aqu. 5%	Room Temp	40°C	slight
Cutting Oil	Room Temp		nil to slight	Hydrochloric Acid 20%	Room Temp	20%	nil to slight
Cyclohexanol	Room Temp	5%	slight	Hydrogen Peroxide	Room Temp	3%	nil to slight
Dibutylphthalate	Room Temp	40%	slight	Hydrogen Sulphide	Room Temp		nil to slight
Diesel Oil	Room Temp		nil to slight	Magnesium Salts, Aqu.	Room Temp	cold saturated	nil to slight
Diesel Oil	Room Temp	5%	nil	Mercury	Room Temp	100%	nil to slight
Diethylether	Room Temp		nil to slight	Mercury Salts, Aqu.	Room Temp	cold saturated	nil to slight
Diethylprestone	Room Temp		nil to slight	Nickel Salts, Aqu.	Room Temp	cold saturated	nil to slight
Dimethylformamide	Room Temp		soluble	Nitric Acid	Room Temp	20%	no resistance
Ethyl Alcohol	Room Temp	100%	slight	Phosphoric Acid	Room Temp	50%	nil to slight
Ethylacetate	Room Temp	40%	poor	Potassium Carbonate, Aqu. (Potash)	Room Temp		nil to slight
Ethylether	Room Temp		slight	Potassium Chloride	Room Temp	cold saturated	nil to slight
Glycerin	Room Temp		nil	Potassium Dichromate, Aqu.	Room Temp		slight
Glycol	Room Temp	2%	nil	Potassium Iodide	Room Temp		nil to slight
Glystantin / Water 1:1	Room Temp		slight	Potassium Nitrate, Aqu.	Room Temp		nil to slight
Glystantin / Water 1:1	80°C		slight	Potassium Permanganate	Room Temp		nil to slight
Hydraulic Oil	Room Temp		slight	Potassium Sulphate, Aqu.	Room Temp		nil to slight
Isopropanol	Room Temp	12%	slight	Sea Water	Room Temp	100%	nil
Isopropyl Alcohol	Room Temp	100%	slight	Silver Salts, Aqu.	Room Temp		nil to slight
Kerosene	Room Temp	3%	nil	Sodium Bicarbonate, Aqu. (Soda)	Room Temp		slight
Machine Oil	Room Temp		nil to slight	Sodium Chloride, Aqu.	Room Temp		nil to slight
Methanol	Room Temp	10%	slight	Sodium Chloride Solution, Conc.	Room Temp		nil
Methyl Alcohol	Room Temp	100%	slight	Sodium Hydroxide Solution 1N	Room Temp		slight
Methylen Chloride	Room Temp		no resistance	Sodium Thiosulphate, Aqu.	Room Temp		nil to slight
Methylethylketone	Room Temp	45%	poor	Sulphur	Room Temp	100%	nil to slight
Mineral Oil	80°C		nil	Sulphur Dioxide	Room Temp		slight
Olive Oil	Room Temp		nil	Sulphuric Acid 20%	Room Temp		slight
Paraffin Oil	Room Temp		nil to slight	Toluene	Room Temp	35%	poor
Siccinic Acid, Aqu.	Room Temp	cold saturated	nil to slight	Water	100°C		poor
Vegetable Oil And Fats	Room Temp		nil	Water	Room Temp		nil
				Water	80°C		nil to slight

#### Key:

Nil: Resistance over a prolonged period.

Nil to slight: After a certain time appreciable differences are noticeable.

Slight: Conditionally resistant.

Poor: Short term contact possible under certain conditions.

No resistance: Pronounced attack

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