

# PVC Pellets for Cable

## Application

CP-01 PVC pellets for cable is a high-performance PVC pellet, mainly used for 70 °C low temperature grade wire and cable jacket.

## Feature

CP-01 PVC pellets for cable has good mechanical and physical properties and extrusion processing performance, suitable for temperature level of 70 degrees of wire and cable jacket .

## Main Technical Parameters

Parameter	Typical value	Test method
Appearance	Black	Visual inspection
Density (g/cm <sup>3</sup> )	<1.4	GB/T 1033.1-2008
Tensile strength (MPa)	≥15	GB/T 1040.3-2006
Elongation at break %	≥180	GB/T 1040.3-2006
Thermal deformation %	≤40	IEC 261: 1990
Oven thermal ageing (100°C, 168h) Max change of tensile strength % Max change of elongation at break%	±20 ±20	GB/T 2951.12-2008
Thermal stability time 200°C/min	60	GB/T 2951.12-2008
Dielectric strength Ed/(kV/mm)	≥20	GB/T 1408.1-2006
Volume resistivity 20°C ρv/Ω.m	≥1*10 <sup>12</sup>	GB/T 1410-2006
Volume resistivity 70°C ρv/Ω.m	≥1*10 <sup>9</sup>	GB/T 1410-2006
Thermal aging mass loss (100±2°C,168h)/g/m <sup>2</sup>	≤20	IEC 261: 1990

## Manufacturability

CP-01 PVC pellets for cable uses ordinary PVC extruder, the length-diameter ratio of screw L/D ≥ 20. Take φ 60 for example, three layers of strainer (80 mesh/120 mesh /80 mesh) are recommended, melt temperature should be below 180 °C, and to squeeze out a smooth surface and pore-free on cross section are the best.

## Other

1.Payment :TT/LC

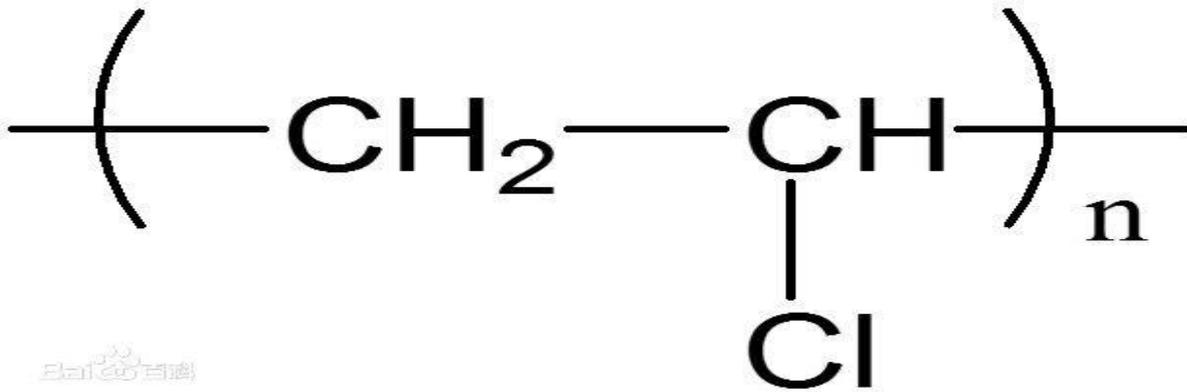
30% deposit ,70% balance should be paid before shipment.

2.Delivery date

20' GP : within 7 working days after receiving the deposit.

40' GP : within 10 working days after receiving the deposit.

## About PVC:



### Mechanical

PVC has high hardness and mechanical properties. The mechanical properties enhance with the molecular weight increasing but decrease with the temperature increasing. The mechanical properties of rigid PVC (uPVC) are very good; the elastic modulus can reach 1500-3,000 MPa. The soft PVC (flexible PVC) elastic limit is 1.5 – 15 MPa.

### Thermal and fire

The heat stability of raw PVC is very poor, so the addition of a heat stabilizer during the process is necessary in order to ensure the product's properties. Traditional product PVC has a maximum operating temperature around 140° F (60° C) when heat distortion begins to occur.[23] Melting temperatures range from 212° F to 500° F (100° C to 260° C) depending upon manufacture additives to the PVC. The linear expansion coefficient of rigid PVC is small and has good flame retardancy, the limiting oxygen index (LOI) being up to 45 or more. The LOI is the minimum concentration of oxygen, expressed as a percentage, that will support combustion of a polymer and noting that air has 20% content of oxygen.

As a thermoplastic, PVC has an inherent insulation that aids in reducing condensation formation and resisting internal temperature changes for hot and cold liquids.

### Electrical

PVC is a polymer with good insulation properties, but because of its higher polar nature the electrical insulating property is inferior to non polar polymers such as polyethylene and polypropylene.

Since the dielectric constant, dielectric loss tangent value, and volume resistivity are high, the corona resistance is not very good, and it is generally suitable for medium or low voltage and low frequency insulation materials.

## Chemical

PVC is chemically resistant to acids, salts, bases, fats, and alcohols, making it resistant to the corrosive effects of sewage, which is why it is so extensively utilized in sewer piping systems.[23] It is also resistant to some solvents, this, however, is reserved mainly for uPVC (unplasticized PVC). Plasticized PVC, also known as PVC-P, is in some cases less resistant to solvents. For example, PVC is resistant to fuel and some paint thinners. Some solvents may only swell it or deform it but not dissolve it, but some, like tetrahydrofuran or acetone, may damage it.