

POLYVINYLCHLORIDE (PVC)

■ General

PVC is the most widely used material in the plastics industry. There are various types of PVC used in the wire and cable industry. Many Standards Authorities have specified PVC parameters for different PVC compounds. Including UL, CSA and VDE.

PVC that hardens after polymerisation is not suitable for insulating and protecting wires and cables. The necessary mechanical, thermal and electrical levels can only be reached with the addition of complements such as:

▶ softeners ▶ stabilizers ▶ filler materials ▶ slip additives

■ Materials

1. custom blended PVC (Y)

Our special custom blended PVC, are used for insulation and jacketing purposes. PVC type YA is used for insulation and is particularly flexible and has very good electrical characteristics. PVC type YM jacket material has good mechanical characteristics and high flexibility.

The temperature range is as follows:

Static: -40/+70 °C
Flexing: + 5/+70 °C

2. cold resistant PVC (YK)

Cold resistant PVC shows good flexibility and mechanical resistance even at sub-zero temperatures. It can also be exposed to various weather influences.

The temperature range is as follows:

Static: -40/+70 °C
Flexing: -20/+70 °C

3. heat resistant PVC (YW)

Heat resistant PVC can resist temperatures up to 105 °C. The insulation and jacket materials possess good electrical and mechanical values and have very good heat resistance. The highest valid operational temperature on the conductor itself according to DIN VDE 0207 is up to 90 °C. Any application above this temperature reduces the usable life.

The temperature range is as follows:

Static: -40/+90 °C
Flexing: + 5/+90 °C
Short-time use: up to +105 °C

4. oil resistant PVC (YOE)

Our YOE PVC mixtures are oil resistant according to DIN VDE 0281 part 1, mixture TM5. Usually used as a jacket material, it can also be used as insulation.

The temperature range is as follows:

Static: -40/+70 °C
Flexing: + 5/+70 °C

PVC can be classified as inflammable due to its chemical composition. PVC cables fulfill the criteria regarding burning characteristics to EN 60332-1-2 (IEC 60332-1-2), UL, VW1, CSA FT1 and FT2. Halogen is however released during a fire, which is a danger to humans, nature, buildings and machines. In addition, PVC control and data cables are not designed for outdoor use.