

Data Sheet Soft Polyvinyl Chloride (Soft PVC)

Soft PVC is made of polyvinyl chloride and plasticizers, as well as auxiliary materials such as stabilizers, lubricants, etc.

This special material setting based on soft PVC has better elasticity, i.e. it is more similar to rubber and, in contrast to soft rubber, has increased resistance to aging or weathering, as well as increased slip resistance. The material is primarily suitable for sealing purposes and can be used wherever it is important to use elastic parts that are resistant to weathering.

Polyvinyl chloride is one of the most widely used and processed plastics. In the following we give the material properties:

Ignition temperature:	approx. 380 °C
Melting temperature:	approx. 160 °C
Tear resistance:	approx. 60 kg/cm ³
Elongation at break:	approx. 350 %
Impact resilience:	approx. 25 %
Ozone resistance:	crack-free
Heat resistance:	no stickiness and no decrease in Shore hardness after 48 hours at +70 °C
Cold resistance:	still elastic at -40 °C, no breaking or bursting under bending and impact stresses

Depending on the plasticizer additive and the type of polyvinyl chloride, colorless, crystal-clear transparent or milky cloudy, viscoplastic to soft rubber-like compound with a faint odor. With the help of certain dyes, it is possible to color soft polyvinyl chloride in any desired shade. The specific weight varies between 1.20 and 1.35 g/cm³ depending on the plasticizer content.

Flammability

Soft PVC is flame retardant and extinguishes after withdrawal of an applied flame. However, flammability increases with plasticizer content. For certain purposes, however, the use of largely non-flammable, but less cold-resistant plasticizers is possible.

Behavior in the heat and in the cold

The higher the plasticizer content, the lower the heat resistance under mechanical stress, but the better the cold resistance. For special requirements, it is possible to use particularly cold-resistant plasticizers.

Behavior against water

In the case of prolonged water storage, water absorption is 0.1 to approx. 1 %, depending on the type used.

Mechanical and electrical properties

Tensile strength:	approx. 100 – 300 kg/cm ³ (depending on plasticizer content)
Dielectric constant:	approx. 3.6 – 7.5
Dielectric loss factor:	approx. 0.02 – 0.11
Dielectric strength:	approx. 20 KV/mm

Behavior against oxygen

Unlike rubber, polyvinyl chloride or soft polyvinyl chloride is very resistant to aging because it does not contain a double bond in the molecule and does not offer oxygen or ozone in the air any opportunities for attack.

This leaflet is intended to advise you. The information it contains is based on our best knowledge. However, it cannot be construed as binding.

We wish you much pleasure with your mat,

Your FINNSA-Team.