

Quality Directives
Plasticized PVC Films and Sheets
Revised version 2020

1 Scope

These quality directives apply to plasticized PVC films and sheets - hereinafter called "sheets" – which are produced for the fabrication of various applications and whose total plasticizer content is at least 16 phr.

2 Requirements

2.1 Thickness and permissible variations

Thickness and permissible variations must be in accordance with table 1, the test being carried out according to section 3.2.

Table 1

Thickness	
mm	permissible variation in %
0.07 – 0.20	± 10
0.21 – 0.50	± 7.5
0.51 – 2.00	± 5

2.2 Raw materials / composition

The sheets are manufactured from polyvinyl chloride (PVC), plasticizers and stabilisers, pigments, fillers and other additives. Sheets used in combination with other polymer films or textile carriers are not covered by this Directive.

All substances are submitted to the currently valid REACH regulation. Substances listed in annex 14 of the REACH regulation are not allowed to be used, unless a derogation from those provisions is granted. The residual content on vinyl chloride monomer (VCM) must not exceed 1 ppm. The suitability of the raw materials for the manufacture of perfect quality sheets is verified by the sheets' manufacturers.

2.3 General quality

The sheets must be homogeneous. They can be coloured or non-coloured, opaque, transparent or translucent, with or without surface effect, pigmented and cover a range of different degrees of hardness.

It must be possible to unroll the sheets on a level surface with straightforward sheet travel. "Straightforward sheet travel" means that the deviation from the straight line should not exceed 10 cm over a length of 10 m (DIN EN 1848-2).

Further properties can apply according to the application:

- weldability through HF welding or other suitable welding processes
- adhesiveness
- sewability
- suitability for diverse printing applications
- paintability

2.4 Production- and quantity tolerances

The quantity tolerance for production lots up from 1 to per film quality is + / - 10 %. Smaller volumes need to be separately negotiated with the supplier. For certain sheet qualities the minimum quantity may be higher.

3 Tests / Further specification items

3.1 Specimens

Sampling and test items are to be taken according to DIN 16906 unless otherwise agreed and air-conditioned according to DIN 50014-23/50-2.

3.2 Thickness

Thickness according to DIN EN ISO 2286, part 3, 10mm / 3N. Thickness nomination in mm or micrometer (μm).

3.3 Weight measurement

Weight measurement (g/m^2) according to ISO 2286-2.

3.4 Tensile strength and elongation at break

Tensile strength and elongation at break according to DIN EN ISO 527-3/2 indicating the respective speed.

3.5 Dimension stability after storage 10 min. at + 70°C

Dimension changes are determined according to DIN 53 377. The specimens are stored in a heating cabinet during 10 minutes at a temperature of +70°C and stored afterwards during 30 minutes in standard atmosphere on a surface, which does not prevent changes in dimension. Conditions differing from these (temperature, time) must be mentioned in the test report.

3.6 Coldcrack temperature

The coldcrack temperature will be measured according to DIN EN 1876-2.

3.7 Light fastness

Light fastness is determined according DIN EN ISO 4892, part 1 + 2. The evaluation is made according to light fastness scale DIN EN ISO 105 B 02.

3.8 Shore hardness

Shore hardness is determined according to DIN EN ISO 868, indentation time 3 sec. in standard atmosphere. The specimen must be homogeneously molded.

4 Monitoring

The manufacturer maintains a certified quality management system. The compliance with the requirements according to section 3 is verified by means of spot samples controls to be carried out and registered by the sheets manufacturer.

5 Form of delivery

The films are wound on cores or manufactured as customized sizes. Standard is a paper core with 3" = 76 mm inner diameter or 6" = 152 mm.

Variations from this standard need to be negotiated separately. Depending on application plastic tubes or steel or card cores are used. The widths of the sheets depend on the working width of the individual production plants and are further defined by customer requirements.

The cutting of those films is an additional process and needs to be negotiated between film manufacturer and customer.

The cutting precision is dependent on the properties of the film (quality, hardness, width) and the processing technology of the manufacturer.

6 Sustainability and Recycling

Collected and sorted, pre- or post-consumer films and sheets are 100% recyclable!

7 Suppliers

Films and sheets in accordance with these quality directives are supplied by the following member companies of IVK Europe:

Elbtal Plastics GmbH & Co. KG
Grenzstr. 9
D-01640 Coswig
Tel. + 49 3523 5330-0
www.elbtal-plastics.de | www.ELBEpools.com

Continental Surface Solutions
Billing Address:
Konrad Hornschuch AG
Salinenstr. 1
D-74679 Weissbach
Tel. +49 7947 81 8714
www.continental-industry.com / www.skai.com

Renolit AG
Horchheimer Str. 50
67547 Worms
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