



POLYETHYLENE FILM SPECIFICATION

1. APPLICATION AREA

These technical specifications apply to LDPE-films, manufactured by AS Estiko Plastar. Thickness of the manufactured film is 0,150 mm – 0,200 mm, the maximum width of the film fabric is 5400 mm. The film can be use in agriculture, construction industry, as a packaging and covering material in production and commercial areas and for other purposes.

2. PRODUCTION METHOD, MATERIALS

- 2.1. The film is made of polyethylene on extrusion blowing method.
- 2.2. Raw materials for film production are LDPE products with Melt Flow Index 0,3 g/10 min (190 °C; 2,16 kg; ISO 1133) and average density 0,92 g/cm³.
- 2.3. In the extrusion process, basic material is supplemented with additives, increasing mechanical strength, decreasing stickness and controlling smoothness of the film.
For weather aging stability, mainly against decomposition caused by sunshine, the UV-stabilizer is added to the film.

3. TECHNICAL REQUIREMENTS

- 3.1. The film will be supplied in rolls, as:
 - Tube
 - One edge of the tube is cut open
 - Folded tube
- 3.2. Readymade film is winded on polyethylene or cardboard reels, with inside diameter 76-80 mm.
- 3.3. A film should not have defects such as rents, tears, notches, holes, etc.
- 3.4. Width of the film could have deviations as follows:
 - In case of a tube or one edge of the tube is cut open, made without edge cutting:

With of tube to	700 mm ± 2%,
With of tube over	700 mm ± 1%;
- 3.5. Following deviations are allowed for film thickness:
 - Film thickness 0,150-0,200 mm ± 20%;
- 3.6. Allowed length deviations on film in rolls ± 3%;
- 3.7. Accuracy of weight of film rolls ± 0,5 kg.

3.8. Physical-mechanical properties of films should satisfy requirements listed in the following table:

No.	Properties	Typical value	Test method
1.	Tensile strength, N/mm ² MD TD	≥ 18 ≥ 15	ISO 527 500 mm/min
2.	Elongation at break, % MD TD	≥ 300 ≥ 500	ISO 527 500 mm/min
3.	Tearing strength, N	≥ 10	ISO 6383 200 mm/min
4.	Dart drop, g	≥ 200	ASTMD1709
5.	W.V.T.R (Water vapour transmission), (kg/(m ² sPa))	≤ 4.0*10 ⁻¹²	SS 02 15 82

4. HEALTH, OCCUPATIONAL SAFETY AND ENVIRONMENTAL REQUIREMENTS

- 4.1. A film made of LD polyethylene is not toxic, and utilization of the given film in normal conditions does not require application of special measures.
- 4.2. For heat the film at temperatures preceding the melt point of LD polyethylene (e.g. welding), decomposition products such as carbon oxides, unsaturated hydrocarbons, organic acids, aldehydes, etc., could be emitted into environment.
- 4.3. The film is not explosive. In an open fire, it ignites without explosion and burns emitting smoke that contains toxic decomposition products listed in paragraph 4.2.
The ignition temperature is 300 °C and the self-ignition temperature 400 °C. Substantially, the film belongs to the group of combustible materials and to the subgroup of non-flammable materials.
- 4.4. The film is harmless, do not consist heavy metals [Pb, Cd, Hg, Cr(VI)] over 100 mg/kg, which is correspondence to EU regulations.

5. TRANSPORT AND STORAGE

- 5.1. Rolls of film are packed into polyethylene film. Packed final products are stored and transported on wooden stands.
- 5.2. PE-film should be stored in dry conditions at temperatures below 30°C, air relative humidity 40-65% and protected from direct sunlight.
- 5.3. When the warehouse is cold, then the films must before using stay in normal conditions until they warm up +18°C.
- 5.4. Guarantee for film is two years, if above mentionen conditions are fulfilled.

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