

DIN EN 13206:2025-12 (E)

Plastics - Thermoplastic covering films for use in agriculture and horticulture

Contents		Page
European foreword		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Types and use	9
5	Materials	10
6	Durability	10
7	Requirements	11
7.1	General requirements	11
7.2	Requirement for appearance	14
8	Test methods	15
8.1	Determination of thickness	15
8.2	Determination of width	15
8.3	Determination of tensile characteristics	15
8.4	Determination of impact resistance	15
8.5	Determination of elongation under a steady load (creep test)	16
8.6	Determination of visible light transmission	18
8.7	Determination of haze	18
8.8	Determination of IR effectiveness (ir) (thermal clear and thermal diffusing films)	18
8.9	Determination of resistance to weathering	19
8.10	Determination of the chlorine content of used films	20
8.11	Determination of the sulfur content of used films	20
8.12	Determination of the roll/sheet length	20
9	Film acceptance, storage and handling	21
9.1	Acceptance	21
9.2	Storage and handling of rolls	21
10	Designation	21
11	Marking	22
11.1	Marking on the film	22
11.2	Marking on the packaging or label	22
12	Instructions for storage, installation and use of covering films	23
13	Design for recycling and end of life of covering films	23
14	Removal and collection instructions of used covering films	25
Annex A (informative) Exposure to other light sources		26
A.1	Medium pressure mercury vapour lamps	26
A.2	Fluorescent UV lamps	28

Annex B (informative) Empirical correlation between durations of covering films exposed to artificial weathering and a natural exposure	30
B.1 Exposure to xenon-arc lamps	30
B.2 Exposure to medium pressure mercury vapour lamps	32
B.3 Exposure to fluorescent UV lamps	32
Annex C (normative) Determination of the chlorine content by coulometry	34
C.1 Principle	34
C.2 Apparatus and reagents	34
C.3 Test procedure	34
C.4 Calculation and expression of the results	36
C.5 Test report	36
C.6 Precision	36
C.7 Determination of chlorine in the presence of benzotriazole	37
Annex D (normative) Determination of the sulfur content by ICP- OES technique	38
D.1 Instruments and reagents	38
D.2 Method of analysis	38
D.3 References preparation and calibration	39
D.4 Sample preparation (digestion)	40
D.5 Sulfur measurement	40
D.6 Expression of results	40
D.7 Sulfur determination in case of presence of Ni quenchers	40
D.8 Examples of conditions	41
Annex E (informative) Alternative method for the determination of chlorine and sulfur contents by X-ray fluorescence	43
E.1 Principle	43
E.2 Introduction	43
E.3 Apparatus	43
E.4 Test procedure	43
E.5 Calculation and expression of the result	43
E.6 Determination of chlorine in the presence of benzotriazole	43
E.7 Sulfur determination in case of presence of Ni quenchers	44
E.8 The test report shall include the following information:	44
Annex F (informative) Alternative methods for the determination of sulfur content by ultraviolet fluorescence method or by coulometry	45
F.1 Principle	45
F.2 Ultraviolet fluorescence method	45
F.3 Coulometry	47
Annex G (normative) Basic guidance for installation, use and disposal of covering films	50
G.1 Greenhouse covering films	50
G.2 Low tunnel covering films	50
Annex H (informative) Industrial standard formats of films	51
Bibliography	52