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Regulation concerning Tobacco and Tobacco Products (Tobacco Regulation)

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(Tobacco Regulation)

of December 20, 1977

(BGBl. I, p. 2831), as amended by the 1st Amending Regulation of 10.26.1982 (BGBl. I, p. 1444), § 7 Para. 7 of the Additives Sales Regulation of 7.10.1984 (BGBl. I, p. 897), the 2nd Amending Regulation of 3.21.1986 (BGBl. I, p. 368), § 9 of the TabKTHmV Regulation of 10.29.1991 (BGBl. I, p. 2053), Article 1 of the Regulation of 3.8.1996 (BGBl. I, p. 460), Art. 21 of the Regulation Concerning the Revision of the Foodstuffs Additives Regulation of 1.29.1998 (BGBl. I, p. 230) and the 3rd Amending Regulation of 12.8.2003 (BGBl. I, p. 2549)*

Based on § 9, Para. 1, No. 5, § 20, Para. 3, § 21, Para. 1, No. 1, Letter a and No. 2, in conjunction with § 19, No. 4, Letter b, and § 22, Para. 2, Clause 2, of the Foodstuffs and Consumer Products Law of August 15, 1974 (BGBl. I, pp. 1945, 1946), in agreement with the Federal Ministers for Nutrition, Agriculture, Forestry and Economy, and with the consent of the Bundesrat, it is decreed:

* The obligations of EC Directive 98/34 of the European Parliament and Council of June 22, 1998 concerning information procedures in the field of standards and technical regulations (ABl. EC No. L 204, p. 37), amended by EC Directive 98/48 of the European Parliament and Council of July 20, 1998 (ABl. EC No. L 217, p. 18) have been taken into account.

§ 1

- (1) The substances listed in Attachment 1 are approved for the commercial manufacture of tobacco products for the purposes specified therein. The approval of the substances listed in Attachment 1 Part B runs until December 31, 2006.
- (2) The amounts of the approved substances in the tobacco products must not exceed the maximum amounts specified in Attachment 1.
- (3) The approved substances must meet the purity requirements specified in Attachment 1 and the general and applicable special purity requirements of the Additives Sales Regulation.

§ 2

- (1) Odorants and flavorants listed in Attachment 2, No. 1, or obtained from plants or plant parts listed in Attachment 2, No. 2, must not be used for commercial manufacture of tobacco products.
- (2) As an exemption from the provision of Para. 1, camphor may be used for the manufacture of snuff in an amount of up to a maximum of 2 grams per 100 grams of product.
- (3) The use of decoumarinized tonka beans for snuff (Attachment 1, No. 14, Letter b) remains unchanged.

§ 3

- (1) Aromas containing a solvent listed in Attachment 1, No. 1, Clause 2, must display the wording "Only for the manufacture of tobacco products."
- (2) For chewing tobacco, black rolled tobacco and snuff containing a substance listed in Attachment 1, No. 9, the content of these substances must be declared with the wording "with preservative."
- (3) For chewing tobacco and black rolled tobacco containing a substance listed in Attachment 1, No. 10, Letter d, and for snuff containing a substance listed in Attachment 1, No. 10, Letter e, the content of these substances must be declared with the wording "with colorant."
- (4) For chewing tobacco containing saccharin, the content of this substance must be declared with the wording "with saccharin sweetener."
- (5) For cigars containing a substance listed in Attachment 1, No. 10, Letter a, the content of this substance must be declared with the wording "colorant-delustered."
- (6) The declarations specified in Para. 1 to 5 must be printed on packages, containers or other coverings in clearly visible, easily legible manner.
- (7) With the exception of the cases indicated in Para. 1 to 5, a declaration of the substances allowed under § 1 is not required.

§ 3a
(deleted)

§ 4

As an exception to § 22, Para. 2, Clause 1, No. 2 of the Foodstuffs and Consumer Products Law, cigars may display the declaration “natural colorant” or similar wording indicating the natural condition of the wrapper if they are neither colored nor powdered and have received no other surface treatment.

§ 5

The following may not be marketed commercially:

1. Cigars made with inserted tobacco sheets having a tobacco content of less than 75% on a dry weight basis.
2. Cigars with a tobacco sheet content exceeding 25% of the weight of the product, less the weight of a mouthpiece; for cigars with an artificial wrapper, this maximum amount is reduced by the weight of the artificial wrapper.
3. Smoking tobacco and cigarettes containing tobacco sheets with a tobacco content of less than 75% on a dry weight basis.
4. Smoking tobacco and cigarettes in which the proportion of tobacco sheets exceeds 25% of the weight of the tobacco mixture.
5. Chemically bleached tobacco products.
6. Colored cigarette tobacco.
7. Colored smoking tobacco, with the exception of black rolled tobacco.
8. Cigars with an artificial wrapper or a wrapper consisting of a tobacco sheet, provided this is declared on the packages by a clearly visible, easily legible statement “with artificial wrapper”; if the weight proportion of tobacco in the wrapper exceeds 50%, the wording “with tobacco-containing artificial wrapper” may be used instead. For cigars with a wrapper consisting of a tobacco sheet, the declaration may be omitted if the weight proportion of tobacco in the tobacco sheet is at least 75% on a dry weight basis.

§ 5a

It is forbidden to market commercially tobacco products for oral uses other than smoking or chewing.

§ 6

(1) According to § 52, Para. 1, No. 2, of the Foodstuffs and Consumer Products Act, anyone who commercially markets aromas that, in violation of § 3, Para. 1 or 6, are not provided with the required statement or it is not displayed in the prescribed manner will be subject to a penalty.

(2) According to § 52, Para. 2, No. 1, of the Foodstuffs and Consumer Products Act, anyone will be subject to a penalty who

1. in the commercial manufacture of tobacco products intended for sale, uses

a) a substance listed in Attachment 1 in an amount exceeding the maximum permissible amount specified in § 1, Para. 2, or in violation of the purity requirements specified in § 1, Para. 3, or

b) any odorant or flavorant in violation of § 2, Para. 1.

2. commercially markets or sells tobacco products for which, in violation of § 3, Para. 2 to 5 or 6, the content of a substance is not declared or is not declared in the manner specified, or

3. commercially markets or sells tobacco products in violation of the prohibition in § 5 or 5a.

(3) Committing an act defined in Para. 1 or 2 out of negligence constitutes a misdemeanor under § 53, Para. 1 of the Foodstuffs and Consumer Products Act.

§ 7 Berlin Clause

§ 8

(1) This regulation became effective on January 1, 1978.

(2) Tobacco products complying with the stipulations of this Regulation in its version valid on December 18, 2003 may continue to be manufactured until June 18, 2004 and be marketed until stocks have been consumed.

Attachment 1
to § 1

Part A Approved Substances

1. Generally approved as additives for the manufacture of tobacco products:

Aromas meeting the requirements of the Aroma Regulation

Fruits, dried fruits, fruit pulps, fruit juices, concentrated fruit juices and fruit syrups

Spices with the exception of the plants and plant parts specified in Attachment 2, No. 2

Licorice root

Licorice

Coffee

Tea and tea-like products

Cocoa and cocoa products

Alcoholic spirits

Wine and liqueur (fortified) wine

Honey

Maple syrup

Sugars as defined under the Sugar Varieties Regulation and other sugar varieties suitable for human consumption, also caramelized

Dextrins

Molasses

Starch,

Acid-treated, thin-boiling starch

Oxidatively degraded starch

Starch phosphate

The above starches also in the form of swollen starches

Kitchen salt (sodium chloride)

Drinking water

Essences containing the following solvents may also be used for the manufacture of cigarettes, cigars, smoking tobacco and snuff

1,3-butylene glycol

(Purity requirements: boiling range at 1013 millibar (760 torr): 207-209° Celsius; refractive index $n(20,D) = 1.440 \pm 0.0005$; bromine number by the Klein method = max. 0.1; proportion of reducing substances: as for glycerol, according to the rules of the [German] pharmacopoeia).

2. Humectants:

a) For smoking tobacco, cigars, cigarettes, tobacco sheet and artificial wrapper:

Glycerol (E 422)

Hydrogenated glucose syrup

(Purity requirements: clear, colorless, syrupy solutions containing hydrogenated saccharides derived from glucose syrup and suitable for human consumption; minimum D-sorbitol content: 5% on a dry weight basis.)

1,3-Butylene glycol

(Purity requirements: see No. 1)

1,2-Propylene glycol

Triethylene glycol

(Purity requirements: specific gravity 20/20° Celsius: 1.124- 1.126; boiling range at 1013 millibar (760 torr): 280-290° Celsius; refractive index $n(20,D) = 1.4550-1.4560$; ash content: less than 0.01% by weight; monoethylene glycol content: less than 0.1% by weight)

Orthophosphoric acid (E 338)

Glycerophosphoric acid and its sodium, potassium and magnesium compounds up to a maximum total amount of 5% on a dry weight basis

b) For chewing tobacco:

Glycerol (E 422) up to 10% on a dry weight basis of the product

Hydrogenated glucose syrup (Purity requirements: see letter a)

c) For snuff

Hydrogenated glucose syrup (Purity requirements: see letter a)

Liquid paraffin up to a maximum amount of 25% on a dry weight basis of the product

Glycerol (E 422) up to 10% on a dry weight basis of the product

1,2-Propylene glycol

1,3-Butylene glycol (Purity requirements: see No. 1)

3. Glues, Adhesives and Thickening Agents

- a) For cigars, rope tobacco including black rolled tobacco, tobacco sheets and artificial wrappers, as well as glue for seams, filter coverings, mouthpieces and filter (mouthpiece) coatings for cigarettes

Gelatin

Shellac

Collodion

Cellulose acetate

Ethylcellulose, also hydroxyethylated

Methylcellulose (E 461), also hydroxyethylated or carboxymethylated

Carboxymethylcellulose and its sodium (E 466), potassium, calcium and magnesium compounds, also methylated

Carboxymethylstarch with an etherification degree of up to 0.5, dialdehyde starch, prepared from oxidized corn starch with an aldehyde content of at least 90%

Gum arabic (E 414)

Agar (E 406)

Alginic acid (E 400)

Sodium alginate (E 401)

Potassium alginate (E 402)

Calcium alginate (E 404)

Tragacanth (E 413)

Locust bean meal (E 410)

Guar seed meal (guar gum) (E 412)

Mixtures of:

aa) aqueous dispersions of polyvinyl acetate, also partially hydrolyzed, or of the copolymers of vinyl acetate with vinyl esters of long-chain aliphatic, saturated carboxylic acids having a chain length of C₁₈ or with ethylene, and

bb) aqueous solutions of polyvinyl alcohol;

glycerol acetate may be added to these mixtures.

- b) For tobacco sheet:

Glyoxal in a maximum amount of 2% on a dry weight basis of the product or

Melamine formaldehyde resin to a maximum of 2% on a dry weight basis of the product

- c) For smoking tobacco:

Agar (E 406)

Gum arabic (E 414)

- d) For chewing tobacco: Gum arabic (E 414) to a maximum amount of 25% on a dry weight basis of the product

4. Whitening and combustion control agents

Aluminum hydroxide

Aluminum sulfate

Aluminum oxide

Magnesium oxide

Talc

Titanium dioxide (E 17 1)

Sodium, potassium, calcium and magnesium compounds of carbonic acid, formic acid, acetic acid, malic acid, citric acid, tartaric acid, lactic acid and nitric acid.

5. Substances for artificial wrapper and cigarette paper

Cellulose containing substances listed in No. 3, Letter a, and in No. 4.

6. Substances for filters of cigarettes, cigarette tips, cigars, cigar tips and tobacco pipes

Activated charcoal

(Purity requirements: No increase in fluorescence of the solvent after a two-hour extraction with optically pure cyclohexane or benzene in a Soxhlet apparatus.)

Aluminum oxide

Cellulose acetate

Glycerol acetate as binder for cellulose acetate

Silica gel

Magnesium silicate hydrate (Meerschaum)

Polyethylene

Titanium dioxide (E 17 1) up to 2% of the filter weight

Triethylene glycol diacetate

(Purity requirements: Specific gravity at 20/20° Celsius 1.110 - 1.130, boiling range of the major fraction from 5 to 95 mL of a 100 mL sample at 1013 millibar (760 Torr) 288 - 300° Celsius, at 67 millibar (50 Torr) 195 - 205° Celsius, color at most weakly yellowish, refractive index n_D^{20} 1.438 - 1.439, viscosity 9.5 - 9.7 cps at 25° C, triethylene glycol diacetate content at least 97.0%, di-, tetra- and polyethylene glycol diacetate content no more than 1.2%, monoethylene glycol content no more than 0.1%, acids (calculated as acetic acid) not more than 0.05%, maximum water content 0.2%, maximum mineral content 0.01%)

Mixtures of:

a) aqueous dispersions of polyvinyl acetate, also partially hydrolyzed, or of copolymers of vinyl acetate with vinyl esters of long-chain aliphatic saturated carboxylic acids having a chain length up to C_{18} or with ethylene, and

b) aqueous solutions of polyvinyl alcohol as glue for gluing mouthpieces and filter (mouthpiece) covering. Glycerol acetate may be added to these mixtures.

Ethyl citrate in cigarette filters

(Purity requirements: clear, colorless, viscous liquid, odor-free, [without acid content equivalent to 20.2 ± 0.6 mL of 0.2 N KOH/g; total heavy metal content less than 10 ppm; arsenic less than 3 ppm])

7. Substances for filter wrappers, mouthpieces and filter (mouthpiece) covering:

Paper, cardboard, cellulose

Cork and straw

(Purity requirements: must be free of contaminants, particularly Salmonella-free)

Aluminum (E 173)

Aluminum foil, also with protective lacquer

(Purity requirements: Taking into account their composition, the lacquer coatings must be dried in such a manner that no volatile fractions, and particularly no solvents, will be transferred from them to the mouthpieces. After application to an appropriate carrier material, 1 dm² of lacquered surface must not release more than

a) 5.0 mg soluble substances

b) 1.0 mg phenolic substances

c) 0.3 mg formaldehyde

d) 1.0 mg zinc ions

e) 1.0 mg organically bound nitrogen; no aromatic amines must be detectable during extraction with distilled water at 40°C within 10 days.)

8. Substances for hot melts for gluing filter wrappers, mouthpieces and filter (mouthpiece) covering:

a) Copolymers of ethylene and vinyl esters of aliphatic saturated monocarboxylic acids with chain lengths C₂-C₁₈.

(Purity requirements: the melting index according to DIN 53735 must not exceed 500)

b) Hydrogenated polycyclopentadiene resin

(Purity requirements: The viscosity must be at least 2,000 cps at 140°C)

c) Microcrystalline waxes

d) Paraffins of Attachment 2 of the Additives Sales Regulation

e) Mixed styrene polymers and graft polymers from styrene, alpha-methyl styrene and vinyltoluene.

(Purity requirements: From a 3 dm² sheet weighing 10 g produced from the product, when heated to 90°C within 24 hours, not more than 15 mg/dm² of volatile organic substances shall be released.)

f) Polyisobutylene

g) Glycerol and pentaerythritol esters of rosin acid and their hydrogenation products

h) 2,6-Ditert.butyl-4-methylphenol

(Purity requirements: No more than 0.5% of this substance may be added as an antioxidant during preparation of hot melt from substances listed under letters a to e.)

The substances listed under letters a to g may contain only technically unavoidable residues of monomer starting materials and of any added extractable manufacturing aids.

9. Preservatives, but not for cigars or cigarettes, with the exception of cigarette seam glue and tobacco sheet:

Sorbic acid (E 200), sodium sorbate, potassium sorbate (E 202) and calcium sorbate (E 203) up to 2 grams per kilogram of product on a dry weight basis

Benzoic acid (E 210) and sodium benzoate (E 211) up to 5 grams per kilogram of product, calculated as benzoic acid on a dry weight basis

Ethyl para-hydroxybenzoate (E 214) and propyl para-hydroxybenzoate (E 216) and their sodium compounds (E 215 and E 217) up to 5 grams per kilogram of product calculated as benzoic acid on a dry weight basis

For tobacco sheets, also thiabendazole (E 233) up to 0.6 gram per kilogram of product on a dry weight basis.

If these preservatives are used in a mixture with one another, the maximum amount indicated for each substance shall be reduced by a percentage equivalent to the cumulative maximum amounts of the other substances contained in the mixture.

10. Colorants

a) For cigarette paper and for wrapper, tobacco sheet and artificial wrapper for cigars:

Humic acid and its alkali salts

(Purity requirements: These substances must not contain extractable polycyclic aromatic hydrocarbons with three or more rings.)

Buckthorn berry extract, prepared by extracting buckthorn berries (*Rhamnus cartharticus*) with water

Logwood extract, prepared by extracting the heart wood of *Haematoxylon campechianum* with water

Yellowwood extract, prepared by extracting yellowwood (*Morus tinctoria*) with water

Carbo medicinalis vegetabilis [vegetable medicinal carbon] (E153)

Brilliant Black BN (E151)

Cochineal Red A (E124)

Fast Red F

Sunset Yellow S (E110)

Orange GGN

Indigotin I (E132)

Amaranth (E123)

Tartrazine (E102)

and their aluminum, calcium and magnesium compounds (so-called lakes).

- b) For filter wrappers, mouthpieces and filter (mouthpiece) covering for cigars and cigarettes
 The substances listed under letter a as well as gold foil (E 175)
 Gold bronze (copper-zinc alloy with a maximum zinc content of 15%)
 Silver bronze (aluminum E173)
 Calcium carbonate (E 170)
 Calcium sulfate
 Titanium dioxide (E 171), also mixed with mica, where the mica content must not exceed 75% and the colorant mixture must be enveloped by a lacquer binding agent.
 Iron oxides and iron hydroxides (yellow, red, brown, black) (E 172)
 α -(3-Nitro-5-sulfo-6-hydroxyphenylazo)-acetoacetanilide, 1:1 chromium complex, amine salt, and 4-(3-nitro-5-sulfo-6-hydroxyphenylazo)-1-phenyl-3-methylpyrazolone-5, 1:1 chromium complex, amine salt, for protective lacquer of aluminum foil, up to a total of 150 mg/m²
 Coconut shell meal
 (Purity requirements: must be free of foreign matter, particularly Salmonellae)
- c) For glues, adhesives and thickening agents for cigars and smoking tobacco:
 Caramel
- d) For chewing tobacco and black rolled tobacco:
 Iron(III) sulfate (ferric sulfate)
 (Purity requirements as specified in the [German] pharmacopoeia)
 Tannin
- e) For snuff:
 Iron(III) sulfate (ferric sulfate)
 (Purity requirements as specified in the [German] pharmacopoeia)
 Tannin
 Iron oxide, red (E172)
 Carbo medicinalis vegetabilis [vegetable medicinal carbon] (E153)
 Indigotin I (E132)
11. Plasticizers for inks and coatings used for printing on cigarette paper, cigarette filters, filter wraps, mouthpieces and filter (mouthpiece) tipping:
 Glycerol acetate
12. Binding agents for printing inks and coatings of filter wrappers, mouthpieces and filter (mouthpiece) tipping:
 The substances listed under No. 3, Letter a.

13. Substances for printing on cigarette paper and mouthpiece and filter (mouthpiece) tipping paper:

- a) The colorants listed in the Additives Approval Regulation
- b) The other substances listed above under Number 10, Letters a and b, and Numbers 11 and 12
- c) Chrysoin S
Fast Yellow
Archil
Scarlet GN
Ponceau 6 R
Anthraquinone Blue
Black 7984
- d) Magnesium carbonate
Aluminum oxide
Unsaturated drying oils, namely linseed oil and wood oil and the stand oils produced from them by heating.
Paraffin, fluid and viscous
Deodorized mineral oil, up to 25 vol.% in the printing ink ready for use
(Purity requirements: boiling range at 1013 millibar [760 torr]: 200-350° Celsius, all fragrances and flavorants removed.)
Hydrogenated colophonium (rosin) esters and trihydric or polyhydric alcohols of C₃-C₆
Phenol-formaldehyde-modified colophonium (rosin)
Xylene-formaldehyde-modified colophonium (rosin)
Acrylic acid-modified and/or maleic acid-modified colophonium (rosin) and their esters with trihydric and polyhydric alcohols of C₃-C₆
Alkyd resins (polyester from polyhydric alcohols and phthalic acid), also fatty acid modified; fatty acid chain length of C₆ and higher
Condensation products and etherified condensation products of purified monovalent and polyvalent, optionally alkylated phenols with formaldehyde
Xylene-formaldehyde resins and their condensation products with phenol or alkylated phenols
Fatty acid-modified phenol-formaldehyde resins, chain length of the fatty acid greater than C₆
Drying agents in accordance with German Industry Standard [DIN] 55901; salts and oxides of cobalt, manganese, iron, calcium, zirconium and cerium with naphthenic acids, saturated, primarily tertiary, monocarboxylic acids of C₉-C₁₁ and 2-ethyl caproic (hexanoic) acid.
The dried lacquer film may contain at most 0.2% of cobalt or at most 0.5% of the other drying agents (each based on the metal).

14. Other additives

- a) For chewing tobacco:
 - Ammonium chloride
 - Potassium aluminum sulfate
 - Calcium chloride
 - Monopotassium tartrate (tartar)
 - Saccharin
- b) For snuff
 - Yeast
 - Edible fats and oils
 - Decoumarinized tonka beans; the coumarin content of the snuff at most 0.003%
 - Ammonium carbamate (hartshorn salt)
 - Sodium carbonate:
 - Potassium carbonate
 - Calcium carbonate (E170)
 - Ammonium chloride
 - Ammonium hydroxide
 - Calcium chloride
 - Calcium hydroxide
 - Monopotassium tartrate (tartar)
 - 1,3-butylene glycol
 - (For purity requirements see Number 1)
- c) For white snuff powder:
 - Ammonium carbamate (hartshorn salt)
 - Sodium carbonate
 - Calcium carbonate (E170)
 - Ammonium chloride
 - Calcium chloride

Part B

Provisionally approved substances

1. Glues, adhesives and thickening Agents for cigars, rope tobacco including black rolled tobacco, tobacco sheets and artificial wrappers, as well as glue for seams, filter coverings, mouthpieces and filter (mouthpiece) coatings for cigarettes
 - a) Hydroxypropylstarch (E1440)
 - b) Acetylated distarch adipate (E1422)
2. Plasticizers for inks and coatings used for printing on cigarette paper, cigarette filters, filter wraps, mouthpieces and filter (mouthpiece) tipping:
 - a) Acetyl tributyl citrate up to 10% of the product
 - b) Sucrose acetate isobutyrate up to 10% of the product

Attachment 2 to §12, Para. 1

Prohibited Odorants and Flavorants

1. Agaric acid (agaricine, Acidum agarinicum)
Birch tar oil (oleum Betulae empyreumaticum)
Bitter almond oil containing free or bound hydrocyanic acid
Sassafras oil (oleum Sassafras)
Juniper tar oil (oleum Juniperi empyreumaticum)
Camphor oil
Camphor
Coumarin
Safrole
Thujone
2. Odorants and flavorants produced from:
Woody nightshade (Bittersweet) stems (stipites Dulcamarae)
Camphor wood (lignum Camphorae)
Polypodium rootstock (rhizoma Polypodii, rhizoma Filicis dulcis)
Pennyroyal (herba Pulegii)
Quassia wood (bitterwood, lignum Quassiae)
Quillaia bark (cortex Quillaiae, soap bark)
Tansy (herba Tanacetii, worm herb)
Rue (herba Rutaee)
Sassafras wood (lignum Sassafras)
Sassafras leaves (folia Sassafras)
Sassafras bark (cortex Sassafras)
Yellow sweet clover (Melilotus officinalis)
Tonka beans (semen Toncae)
Vanilla plant (Deer tongue) (Liatris odoratissima)
Woodruff (Asperula odorata)

CLAIMS

1. A cigarette filter tipping film comprising a biodegradable substrate, and softener in an amount of less than 25% by weight of the biodegradable substrate, the tipping film being at least partly transparent.
- ~~2. A cigarette filter tipping film according to claim 1 which exhibits an elongation in the machine direction of less than 15%.~~
- ~~3. A cigarette filter tipping film according to claim 1 or claim 2 which exhibits a tensile strength in the machine direction of more than 140MPa.~~
- ~~4. A cigarette filter tipping film according to any one of claims 1 to 3 which exhibits a Young's Modulus in the machine direction of more than 4000MPa.~~
- ~~5. A cigarette filter tipping film according to any one of claims 1 to 4 which exhibits a shrinkage under tropical conditions in the machine and/or transverse directions of less than 5%.~~
- ~~6. A cigarette filter tipping film according to any one of claims 1 to 5 which exhibits a Haze of less than 2.15.~~
- ~~7. A cigarette filter tipping film according to any one of claims 1 to 6 which exhibits a Gloss of more than 98.~~
- ~~8. A cigarette filter tipping film comprising a biodegradable substrate, and softener in an amount of less than 25% by weight of the biodegradable substrate, the tipping film exhibiting:
 - ~~a. an elongation in the machine direction of less than 15%;~~
 - ~~b. a tensile strength in the machine direction of more than 140MPa;~~
 - ~~c. a Young's Modulus in the machine direction of more than 4000MPa;~~
 - ~~d. a shrinkage under tropical conditions in the machine and/or transverse directions of less than 5%;~~
 - ~~e. a Haze of less than 2.15; and/or~~
 - ~~f. a Gloss of more than 98.~~~~
- ~~9. A cigarette filter tipping film according claim 8 being at least partly transparent.~~
- ~~10.2. A cigarette filter tipping film according to any one of claims 1 to 9 wherein the biodegradable substrate is selected from cellulosic substrates, PLA substrates, starch based polymers, hydroxyalkanoates and other biopolymers.~~
- ~~11.3. A cigarette filter tipping film according to claim 10.2 wherein the biodegradable substrate is a cellulosic substrate.~~

~~12.4.~~ A cigarette filter tipping film according to any one of claims 1 to ~~41-3~~ wherein the softener is present in the tipping film in an amount of less than 24% by weight of the biodegradable substrate.

~~13.5.~~ A cigarette filter tipping film according to any one of claims 1 to ~~42-4~~ wherein the softener is selected from glycerol, propane-1,2-diol, softeners mentioned in the TVO list, and combinations of two or more thereof.

~~14.6.~~ A cigarette filter tipping film according to any one of claims 1 to ~~43-5~~ comprising an antiblock/winding aid additive.

~~15.7.~~ A cigarette filter tipping film according to claim ~~44-6~~ wherein the antiblock/winding aid additive is provided in an amount of less than about 0.5% by weight of the biodegradable substrate.

~~16.8.~~ A cigarette filter tipping film according to claim ~~44-6~~ or claim ~~45-7~~ wherein the antiblock/winding aid is selected from amorphous silica, polyethylene glycol, antiblock/winding aids mentioned in the TVO list, and combinations of two or more thereof.

9. A cigarette filter tipping film according to any one of claims 1 to 8 which exhibits an elongation in the machine direction of less than 15%.

10. A cigarette filter tipping film according to any one of claims 1 to 9 which exhibits a tensile strength in the machine direction of more than 140MPa.

11. A cigarette filter tipping film according to any one of claims 1 to 10 which exhibits a Young's Modulus in the machine direction of more than 4000MPa.

12. A cigarette filter tipping film according to any one of claims 1 to 11 which exhibits a shrinkage under tropical conditions in the machine and/or transverse directions of less than 5%.

13. A cigarette filter tipping film according to any one of claims 1 to 12 which exhibits a Haze of less than 2.15.

14. A cigarette filter tipping film according to any one of claims 1 to 13 which exhibits a Gloss of more than 98.

~~17.15.~~ A cigarette filter comprising a filtration material encased in a cylinder of the tipping film of any one of claims 1 to ~~46~~14.

~~18.16.~~ A cigarette comprising a smokable substance and a filter according to claim ~~17~~15.

~~19.~~ A cigarette filter plug material comprising the tipping film of any one of claims 1 to 16 when mechanically treated.