(e.g. 2,2′-dihydroxybenzophenone), benzotriazole or mineral nanoparticles are different from these. In the prior art, the mineral nanoparticles are preferred since organic absorbers frequently display selectivity in their UV-filtering properties and also have a low long-term stability. A UV absorber in combination with a thermal or UV stabilizer is usually employed for protection. Inorganic absorbers such as mineral nanoparticles also scatter visible light having wavelengths in the range from 380 to 780 nm and bring about considerable clouding of the film.

The UV stabilizers and UV absorbers known in the prior art are frequently not suitable for various applications because of food laws, regulations for pharmacological product safety or because of impairment of the visual appearance.

Accordingly, films intended for such applications cannot be provided with UV stabilizers and UV absorbers and on prolonged irradiation with UV light are subject to decomposition which, while it does not impair the function of the packaging, is clearly perceptible as yellowing and gives the consumer the impression of low shelf life and product quality.

Summary

In one aspect, the present disclosure provides a single-layer or multilayer transparent film composed of one or more polymeric materials, **characterized in that** the film has CIE colour values a* and b* such that $-7 \leq a^* \leq 0$, $-15 \leq b^* \leq 0$, an optical transmission T such that $60\ \% \leq T \leq 95\ \%$ and the film comprises one or more layers which, independently of one another, consist of a polymeric material having a proportion by weight of from 60 to 99 % by weight of polyvinylidene chloride (PVdC), based on the total weight of the layer. In another aspect, the present disclosure provides a blister film which is formed from a film as described herein. In another aspect, the present disclosure provides a process for producing a single-layer or multilayer transparent film composed of one or more polymeric materials in one or more film plants, which comprises the steps: (a)provision of one or more polymeric materials; (b)provision of one or more dyes; (c) mixing of the one or more dyes with one or more of the polymeric materials in predetermined proportions;

(d) plasticization of the one or more polymeric materials in one or more gelling apparatuses; and (e) shaping of the one or more polymeric materials to give a film by means of extrusion, coextrusion, calendering, coating, extrusion coating and/or lamination; **characterized in that** the one or more dyes are added in such proportions that the film has CIE colour values a* and b* such that $-7 \leq a^* \leq 0$, $-15 \leq b^* \leq 0$ and an optical transmission T such that $60\ \% \leq T \leq 95\ \%$, and the film comprises one or more layers which, independently of one another, consist of a polymeric material having a proportion by weight of from 60 to 99 % by weight of polyvinylidene chloride (PVdC), based on the total weight of the layer.

It is an object of the present invention to alleviate the above problem and provide a transparent film with discolouration compensation.

This object is achieved by a single-layer or multilayer transparent film composed of one or more polymeric materials having CIE colour values a* and b* such that $-7 \leq a^* \leq 0$, $-15 \leq b^* \leq 0$ and an optical transmission T such that $60\ \% \leq T \leq 95\ \%$.

In addition, the object of the invention is achieved by a single-layer or multilayer transparent film composed of one or more polymeric materials having an optical transmission T such that $60\ \% \leq T \leq 95\ \%$, where the film contains one or more main dyes which absorb light having wavelengths in the range from 520 to 600 nm.

Claims

1. Single-layer or multilayer transparent film composed of one or more polymeric materials, **characterized in that** the film has CIE colour values a* and b* such that $-7 \leq a^* \leq 0$, $-15 \leq b^* \leq 0$, an optical transmission T such that $60\ \% \leq T \leq 95\ \%$ and the film comprises one or more layers which, independently of one another, consist of a polymeric material having a proportion by weight of from 60 to 99 % by weight of polyvinylidene chloride (PVdC), based on the total weight of the layer.

2. Film according to Claim 1, **characterized in that** $-7 \leq a^* \leq -5$, $-6 \leq a^* \leq -4$ or $-5 \leq a^* \leq -3$.

3. Film according to Claim 1, **characterized in that** $-4 \leq a^* \leq -2$, $-3 \leq a^* \leq -1$ or $-2 \leq a^* \leq 0$.

4. Film according to any one of Claims 1 to 3, **characterized in that** $-15 \leq b^* \leq -11$, $-13 \leq b^* \leq -9$ or $-11 \leq b^* \leq -7$.

5. Film according to any one of Claims 1 to 3, **characterized in that** $-9 \leq b^* \leq -5$, $-7 \leq b^* \leq -3$, $-5 \leq b^* \leq -1$ or $-3 \leq b^* \leq 0$.

6. Film according to one or more of Claims 1 to 5, **characterized in that** the film has an optical transmission T such that $65\ \% \leq T \leq 95\ \%$, $70\ \% \leq T \leq 95\ \%$, $75\ \% \leq T \leq 95\ \%$, $80\ \% \leq T \leq 95\ \%$, $85\ \% \leq T \leq 95\ \%$ or $90\ \% \leq T \leq 95\ \%$.

7. Film according to one or more of Claims 1 to 6, **characterized in that** it contains one or more main dyes which absorb light having wavelengths in the range from 520 to 600 nm.

8. Film according to one or more of Claims 1 to 7, **characterized in that** it contains one or more supplementary dyes which absorb light having wavelengths in the range from 520 to 600 nm, where the ratio of the integrated absorption of the one or more main dyes in the wavelength range from 520 to 600 nm to the integrated absorption of the one or more supplementary dyes in the wavelength range from 520 to 600 nm is in the range from 4:1 to 1:1.

9. Film according to one or more of Claims 1 to 8, **characterized in that** the film comprises one or more layers which, independently of one another, consist of a polymeric material having a proportion by weight of from 60 to 99 % by weight of vinyl chloride polymer (VCP), based on the total weight of the layer.

10. Blister film which is formed from a film according to one or more of Claims 1 to 9.

11. Process for producing a single-layer or multilayer transparent film composed of one or more polymeric materials in one or more film plants, which comprises the steps:

(a) provision of one or more polymeric materials;

(b) provision of one or more dyes;

(c) mixing of the one or more dyes with one or more of the polymeric materials in predetermined proportions;

(d) plasticization of the one or more polymeric materials in one or more gelling apparatuses; and

(e) shaping of the one or more polymeric materials to give a film by means of extrusion, coextrusion, calendering, coating, extrusion coating and/or lamination;

characterized in that

the one or more dyes are added in such proportions that the film has CIE colour values a* and b* such that $-7 \leq a^* \leq 0$, $-15 \leq b^* \leq 0$ and an optical transmission T such that $60\ \% \leq T \leq 95\ \%$, and

the film comprises one or more layers which, independently of one another, consist of a polymeric material having a proportion by weight of from 60 to 99 % by weight of polyvinylidene chloride (PVdC), based on the total weight of the layer.