CLAIMS:

1. A fuse element (12_1; 12_2), comprising two connecting contacts (24_1', 24_1"; 24_2', 24_2") and an interposed conductive track (26_1; 26_2), wherein the conductive track (26_1; 26_2) has a reduced line cross-section in relation to the connecting contacts (24_1', 24_1"; 24_2', 24_2") at least in some sections, further comprising at least one overlay (16_1; 16_2', 16_2"), wherein the fuse element (12_1; 12_2) and the overlay (16_1; 16_2', 16_2") each comprise materials which undergo diffusion when a predetermined ambient temperature is exceeded and when an electric current is conducted by the fuse element (12_1; 12_2), wherein the at least one overlay (16_1) is arranged within the conductive track (26_1) adjacent to one of the connecting contacts (24_1', 24_1") of the fuse element (12_1).

2. The fuse element (12_1; 12_2) according to claim 1, wherein the at least one overlay (16_1; 16_2', 16_2") is arranged at least in sections within the conductive track (26_1; 26_2).

3. The fuse element (12_2) according to claim 1 or 2, wherein the line cross-section of the conductive track (26_2) increasingly converges step-by-step to the line cross-section of the connecting contacts (24_2', 24_2").

4. The fuse element (12_2) according to claim 3, wherein the at least one overlay (16_2', 16_2") is arranged at least in sections within the conductive track (26_2) in a region of the gradually increasing line cross-section.

5. The fuse element (12_2) according to claim 3, wherein the at least one overlay (16_2', 16_2") is arranged in a region of the conductive track (26_2) with a gradually increasing line cross-section adjacent to a section of the conductive track

(26_2) with minimal line cross-section.

6. The fuse element (12_1; 12_2) according to claim 1 or 2, further comprising at least one recess (20_1; 20_2', 20_2") which is introduced into the conductive track (26_1; 26_2) and in which the at least one overlay (16_1; 16_2', 16_2") is arranged.

7. The fuse element (12_1; 12_2) according to claim 6, wherein the at least one recess (20_1; 20_2', 20_2") is oriented in a continuously transverse manner in relation to the longitudinal direction of the conductive track (26_1; 26_2).

8. The fuse element (12_1; 12_2) according to claim 1 or 2, wherein the material of the fuse element (12_1; 12_2) comprises copper and the material of the overlay (16_1; 16_2', 16_2") comprises tin.

9. A fuse (10), comprising at least one fuse element (12; 12', 12") according to claim 1 or 2 and further comprising a base support (14) made of an electrically insulating material, wherein the fuse element (12; 12', 12") is arranged on a surface of the base support (14).

10. The fuse (10) according to claim 9, wherein the fuse element (12', 12") is arranged on opposite surfaces of the base support (14).

11. The fuse (10) according to claim 9, further comprising two base contacts (18', 18") which are each electrically connected to connecting contacts of the fuse elements (12', 12") which are opposite the base support (14).

12. The fuse (10) according to claim 9, wherein the base support (14) comprises a Rogers4000 material.

13. The fuse (10) according to claim 9, wherein the at least one fuse element (12; 12', 12") is coated with a protective lacquer (22; 22', 22").

14. A method for producing a fuse (10), comprising the steps of:
providing at least one fuse element (12; 12', 12") having two connecting contacts (24', 24") and an interposed conductive track (26), such that the conductive track (26) has a reduced line cross-section in relation to the connecting contacts (24', 24") at least in some sections;
providing a base support (14);
providing the fuse element (12; 12', 12") with at least one overlay (16; 16', 16"), wherein the at least one overlay (16; 16', 16") is arranged within the conductive track (26) adjacent to one of the connecting contacts (24', 24") of the fuse element (12; 12', 12"), wherein the fuse element (12; 12', 12") and the overlay (16; 16', 16") are each selected from materials which undergo diffusion when a predetermined ambient temperature is exceeded and when an electric current is conducted by the fuse element (12; 12', 12"), and
arranging the at least one fuse element (12; 12', 12") on the base support (14).

15. The method according to claim 14, wherein the at least one overlay (16; 16', 16") is arranged at least in sections within the conductive track (26) of the fuse element (12; 12', 12").

16. The method according to claim 13 or 14, wherein the step of providing the fuse element (12; 12', 12") with the at least one overlay (16; 16', 16") comprises arranging the

overlay (16; 16', 16") in at least one recess (20; 20', 20") introduced into the conductive track (26).

17. An SMD fuse, comprising a fuse (10) according to claim 9.

18. An SMD circuit, comprising an SMD fuse according to claim 17.

19. The fuse (10) according to claim 9, wherein the at least one fuse element (12; 12', 12") is coated with a protective lacquer (22; 22’, 22"), which is a protective polymer lacquer.