

Statement regarding ECE R 118 burning behaviour of materials

for SENSORswitches, signal lights and indicators, stop request buttons and proximity switches from CAPTRON Electronic GmbH.

Requirements according to ECE R 118 (2015)

Requirements for the flammability of materials in vehicles are listed in chapter 6.2. There are prescribed fire safety checks for specific interior materials (paragraphs 6.2.1 to 6.2.6):

6.2.1. *The following materials shall undergo the test described in Annex 6 to this Regulation:*

(a) material(s) and composite material(s) installed in a horizontal position in the interior compartment and,

(b) insulation material(s) installed in a horizontal position in the engine compartment and any separate heating compartment.

The result of the test shall be considered satisfactory if, taking the worst test results into account, the horizontal burning rate is not more than 100 mm/minute or if the flame extinguishes before reaching the last measuring point.

Materials fulfilling the requirements of paragraph 6.2.3 are considered to fulfil the requirements in this paragraph.

6.2.2. *The following materials shall undergo the test described in Annex 7 to this Regulation:*

(a) material(s) and composite material(s) installed more than 500 mm above the seat cushion and in the roof of the vehicle,

(b) insulation material(s) installed in the engine compartment and any separate heating compartment.

The result of the test shall be considered satisfactory if, taking the worst test results into account, no drop is formed which ignites the cotton wool.

6.2.3. *The following materials shall undergo the test described in Annex 8 to this Regulation:*

(a) material(s) and composite material(s) installed in a vertical position in the interior compartment,

(b) insulation material(s) installed in a vertical position in the engine compartment and any separate heating compartment.

The result of the test shall be considered satisfactory if, taking the worst test results into account, the vertical burning rate is not more than 100 mm/minute or if the flame extinguishes before the destruction of one of the first marker threads occurred.

6.2.4. *Materials achieving an average CFE (critical heat flux at extinguishment) value greater or equal to 20 kW/m², when tested according to ISO 5658-2 (1), are deemed to comply with the requirements of paragraphs 6.2.2 and 6.2.3, provided no burning drops are observed when taking the worst test results into account.*

6.2.5. *All insulation material(s) installed in the engine compartment and any separate heating compartment shall undergo the test described in Annex 9 to this Regulation.*

The result of the test shall be considered satisfactory if, taking the worst test results into account, the increase of the weight of the test sample does not exceed 1 g.

Recesses necessary for technical reasons, e.g. tubes or structural members that need to pass through the material shall be allowed as long as the protection is maintained (e.g. sealant, tape, etc.).

6.2.6. *Electric cables shall undergo the resistance to flame propagation test described in ISO standard 6722:2006, paragraph 12.*

The result of the test shall be considered satisfactory if, taking into account the worst test result, any combustion flame of insulating material shall extinguish within 70 seconds and a minimum of 50 mm insulation at the top of the test sample shall remain unburned.

6.2.7. *Materials which are not required to undergo the tests described in Annexes 6 to 8 are:*

6.2.7.1. *Parts made of metal or glass;*



Rail

6.2.7.2. *Each individual seat accessory with a mass of non-metallic material less than 200 g. If the total mass of these accessories exceeds 400 g of non-metallic material per seat, then each material must be tested;*

6.2.7.3. *Elements of which the surface area or the volume does not exceed respectively:*

6.2.7.3.1. *100 cm² or 40 cm³ for the elements which are connected to an individual seating place;*

6.2.7.3.2. *300 cm² or 120 cm³ per seat row and, at a maximum, per linear metre of the interior of the interior compartment for these elements which are distributed in the vehicle and which are not connected to an individual seating place;*

6.2.7.4. *Elements for which it is not possible to extract a sample in the prescribed dimensions as specified in paragraph 3.1 of Annex 6 and paragraph 3 of Annex 7.*

(Minimum dimension of samples: annex 6 paragraph 3.1: width 3-60mm, length 356mm)

(Minimum dimension of samples: annex 6 paragraph 3.1: width 70mm, length 70mm)

Assessment:

For SENSORswitches, signal lights and indicators, stop request buttons and proximity switches from CAPTRON Electronic GmbH, which fall below the indicated space, weight, and volume classifications as stated in paragraph 6.2.7 as well as minimum specimen dimensions of the ECE R 118, which results in no needed assessment.

These products comply with the requirements of the regulation ECE R 118.