CLEPA
European Association of Automotive Suppliers

Informal document No.GRSP-39-15
(39th GRSP, May 15 – 19, 2006
agenda item B.1.3.)

PROPOSAL FOR A DRAFT AMENDMENT OF REGULATION NO. 16
(safety belts and restraint systems for occupants of power-driven vehicles)

Transmitted by the Expert from CLEPA

1. Proposal

Paragraph 6.3.1.2 , this Paragraph should be deleted

Paragraph 7.4.1.1, amend to read:

7.4.1.1. Temperature-conditioning and Hygrometrics

The strap shall be *conditioned in accordance with ISO 139, using the alternative standard atmosphere*. If the test is not carried out immediately after conditioning, the specimen shall be placed in a hermetically-closed receptacle until the test begins. The breaking load shall be determined within 5 minutes after removal of the strap from the conditioning atmosphere or from the receptacle.

Paragraph 7.4.1.2.1, amend to read:

7.4.1.2.1. The provisions of Recommendation ISO 105-B02 shall apply. The strap shall be exposed to light for the time necessary to produce a contrast equal to Grade 4 on the grey scale on Standard Blue Dye No. 7.

Paragraph 7.4.1.3, add note:

7.4.1.3. Cold-conditioning

...

Note: This test shall not be required on webbing made from material which is inherently resistant to cold conditioning.

Paragraph 7.4.1.4, add note:

7.4.1.4. Heat-conditioning

...

Note: This test shall not be required on webbing made from material which is inherently resistant to cold conditioning.

Paragraph 7.4.1.5, add note:

7.4.1.5. Exposure to water

...

Note: This test shall not be required on webbing made from material which is inherently resistant to cold conditioning.

2. Justification

Paragraph 6.3.1.2 :
Exact measurement of width under load is not feasible without tolerance of reference force (980 daN). Furthermore and more importantly however woven textile are getting wider under load due to binding structure and therefore this requirement is of no use and should be deleted.

Paragraph 7.4.1.1:
Currently the Regulation requires 24 hours duration for conditioning of the samples. For textiles this is technically not necessary. For textiles conditioning is completed when the sample fabric is in balance with surrounding atmosphere. Balance is reached if subsequent weight measures at 2h interval do not show difference in weight of more than 0,25%. ISO139 takes advantage of this. Due to this conditioning in accordance with ISO 139, using the alternative standard atmosphere, is current practice of most Technical Services. Hence the amendment proposed will align today's practice with the Regulation.

he table below gives examples for duration of conditioning to reach the balance mentioned above for some webbing types.

webbing type sample length ~20cm	weight new state [g]	weight after conditioning at 23°C / 50% [g]	duration of conditioning [h]
piece dyed	10,02	10,02	2
spun dyed	10,04	10,04	2
piece dyed	10,03	10,03	1
spun dyed	10,56	10,56	1

Paragraph 7.4.1.2.1:
The revision of ISO 105-B02 referred to in the current text of the Regulation is out of date and not even available for purchase anymore. In order to avoid updating of the regulation with each more recent revision of International Standards it is proposed to refer to the respective latest revision instead.

Paragraph 7.4.1.3 / 7.4.1.4 / 7.4.1.5:
Current Webbing material is 100% PES material.
Conditioning of PES webbing as described in paragraphs 7.4.1.3 – 7.4.1.5 has no influence on tensile strength, see exemplary test results attached.
It is moreover proven by long-time conformity of production tests of PES webbing.

Influence of webbing conditioning acc. ECE Regulation No. 16 on webbing strength				
Webbing type	Colour / colouring method	Strength after heat-conditioning acc. 7.4.1.4. % of average new state	Strength after cold-conditioning acc. 7.4.1.3. % of average new state	Strength after exposure to water acc. 7.4.1.5. % of average new state
94207	Black / spun dyed	98,6 / 99,7 / 99,7	100 / 100 / 100	100 / 100 / 100
83041	Black / spun dyed	98,7 / 99 / 99,4	100 / 100 / 100	99,4 / 99,7 / 100
83054	Black / spun dyed	100 / 99,6 / 100	100 / 100 / 99,3	100 / 100 / 100
78057	Black / spun dyed	100 / 100 / 100	100 / 100 / 100	100 / 100 / 100
97017	Alpacagrau / piece dyed	100 / 100 / 100	100 / 100 / 100	100 / 100 / 100
87004	Kiesel / piece dyed	100 / 100 / 100	100 / 100 / 100	100 / 100 / 100
83071	Schwarz / spun dyed	99 / 99 / 99,3	100 / 100 / 100	100 / 100 / 100
95050	Beige 3 / spun dyed	99,3 / 99,6 / 100	99,6 / 100 / 100	100 / 100 / 100
94207	Schwarz / spun dyed	98,9 / 99,6 / 99,6	100 / 100 / 100	100 / 100 / 100
83041	Schwarz / spun dyed	99,4 / 99,7 / 100	100 / 100 / 100	100 / 100 / 100

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