Agreement

Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions*

(Revision 2, including the amendments which entered into force on 16 October 1995)

Addendum 112 – Regulation No. 113

Revision 3 - Amendment 4

Supplement 5 to the 01 series of amendments – Date of entry into force: 8 October 2015

Uniform provisions concerning the approval of motor vehicle headlamps emitting a symmetrical passing-beam or a driving-beam or both and equipped with filament, gas-discharge light sources or LED modules

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2015/30.

UNITED NATIONS

Annex 4,

*Paragraph 1.2.1.1.*, amend to read:

"1.2.1.1. Test mixture

1.2.1.1.1. For headlamp with the outside lens in glass:

The mixture of water and a polluting agent to be applied to the headlamp shall be composed of:

9 parts by weight of silica sand with a particle size of 0-100 μm,

1 part by weight of vegetal carbon dust produced from beech wood with a particle size of 0-100 μm,

0.2 parts by weight of NaCMC\(^3\), and

5 parts by weight of sodium chloride (pure at 99 per cent),

an appropriate quantity of distilled water, with a conductivity of \(\leq 1 \mu S/m\).

The mixture shall not be more than 14 days old.

1.2.1.1.2. For headlamp with outside lens in plastic material:

The mixture of water and polluting agent to be applied to the headlamp shall be composed of:

9 parts by weight of silica sand with a particle size of 0-100 μm,

1 part by weight of vegetal carbon dust produced from beech wood with a particle size of 0-100 μm,

0.2 part by weight of NaCMC\(^3\).

5 parts by weight of sodium chloride (pure at 99 per cent),

13 parts by weight of distilled water with a conductivity of \(\leq 1 \mu S/m\), and

2 ± 1 parts by weight of surface-actant.\(^4\)

The mixture shall not be more than 14 days old."
Annex 12,

Paragraph 4.2., Table UV, amend to read:

"Table UV

Values according to "IRPA/INIRC Guidelines on limits of exposure to ultraviolet radiation". Wavelengths (in nanometres) chosen are representative; other values should be interpolated.

<table>
<thead>
<tr>
<th>λ</th>
<th>S(λ)</th>
<th>λ</th>
<th>S(λ)</th>
<th>λ</th>
<th>S(λ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>0.430</td>
<td>305</td>
<td>0.060</td>
<td>355</td>
<td>0.000 16</td>
</tr>
<tr>
<td>255</td>
<td>0.520</td>
<td>310</td>
<td>0.015</td>
<td>360</td>
<td>0.000 13</td>
</tr>
<tr>
<td>260</td>
<td>0.650</td>
<td>315</td>
<td>0.003</td>
<td>365</td>
<td>0.000 11</td>
</tr>
<tr>
<td>265</td>
<td>0.810</td>
<td>320</td>
<td>0.001</td>
<td>370</td>
<td>0.000 09</td>
</tr>
<tr>
<td>270</td>
<td>1.000</td>
<td>325</td>
<td>0.000 50</td>
<td>375</td>
<td>0.000 077</td>
</tr>
<tr>
<td>275</td>
<td>0.960</td>
<td>330</td>
<td>0.000 41</td>
<td>380</td>
<td>0.000 064</td>
</tr>
<tr>
<td>280</td>
<td>0.880</td>
<td>335</td>
<td>0.000 34</td>
<td>385</td>
<td>0.000 053</td>
</tr>
<tr>
<td>285</td>
<td>0.770</td>
<td>340</td>
<td>0.000 28</td>
<td>390</td>
<td>0.000 044</td>
</tr>
<tr>
<td>290</td>
<td>0.640</td>
<td>345</td>
<td>0.000 24</td>
<td>395</td>
<td>0.000 036</td>
</tr>
<tr>
<td>295</td>
<td>0.540</td>
<td>350</td>
<td>0.000 20</td>
<td>400</td>
<td>0.000 030</td>
</tr>
<tr>
<td>300</td>
<td>0.300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Paragraph 5.2., amend to read:

"5.2. One module of each type shall be submitted by the applicant with the light source control gear, if applicable, and sufficient instructions.

Suitable thermal management (e.g. heat sink) may be provided, to simulate similar thermal conditions as in the corresponding headlamp application.

Before the test the LED module shall be aged at least for seventy-two hours under the same conditions as in the corresponding headlamp application.

In the case of use of an integrating sphere, the sphere shall have a minimum diameter of one meter, and at least ten times the maximum dimension of the LED module, whichever is the largest. The flux measurements can also be performed by integration using a goniophotometer. The prescriptions in CIE–Publication 84 - 1989, regarding the room temperature, positioning, etc., shall be taken into consideration.

The LED module shall be burned in for approximately one hour in the closed sphere or goniophotometer.

The flux shall be measured after stability has occurred, as explained in paragraph 4.3.1.2. of this annex."