

## Proposal for **Supplement 2 to the 07 series of amendments to UN Regulation No. 107 (as adopted by GRSG at its 112 session)**

List of contents, amend to read:

"Annex 5 ~~(Reserved)~~ Requirements to establish the visual contrast"

Insert new paragraphs 2.44. to 2.48. (Definitions), to read:

- 2.44. "Visual contrast" (luminance contrast) means the brightness ratio between an object and its immediate background/surrounding which allows the object to be distinguished from its background/surroundings.
- 2.45. "Reflectance"  $\rho$  (rho) is the quantitative ratio between reflected light and the incident light on the surface of a flat material. It consists of various portions of "regular reflectance" and "diffuse reflectance".
- 2.46. "Regular reflectance"  $\rho_r$  is the reflection without diffusion in accordance with the laws of optical reflection as in a mirror.
- 2.47. "Diffuse reflectance"  $\rho_d$  is the ratio of the light that has undergone diffuse reflection to the incident light.
- 2.48. "Luminous flux"  $\Phi$  (phi) describes the power of a light source."

Annex 3

Paragraph 7.11.4., amend to read:

"7.11.4. ~~(Reserved)~~ Handrails and handholds in toilets."

Insert new paragraph 7.11.4.1., to read:

"7.11.4.1. If a toilet is fitted, a suitable handrail or handhold shall be provided in the interior."

Annex 5, amend to read:

### "Annex 5

#### ~~(Reserved)~~ Requirements to establish the visual contrast

1. The visual contrast C shall be established according to the following formula:

$$C = \frac{|\rho_1 - \rho_2|}{\rho_1 + \rho_2}$$

With:  $\rho_1$  = the reflectance of the material of the object to be seen

$\rho_2$  = the reflectance of the area resp. material surrounding the contrast object

2. For determination of the reflectance values  $\rho_1$ ,  $\rho_2$  and  $\rho_d$  an integrating sphere according to CIE 38:1977 shall be used.

The reflectance shall be either read directly from the indicating instrument or calculated according to the following formula:

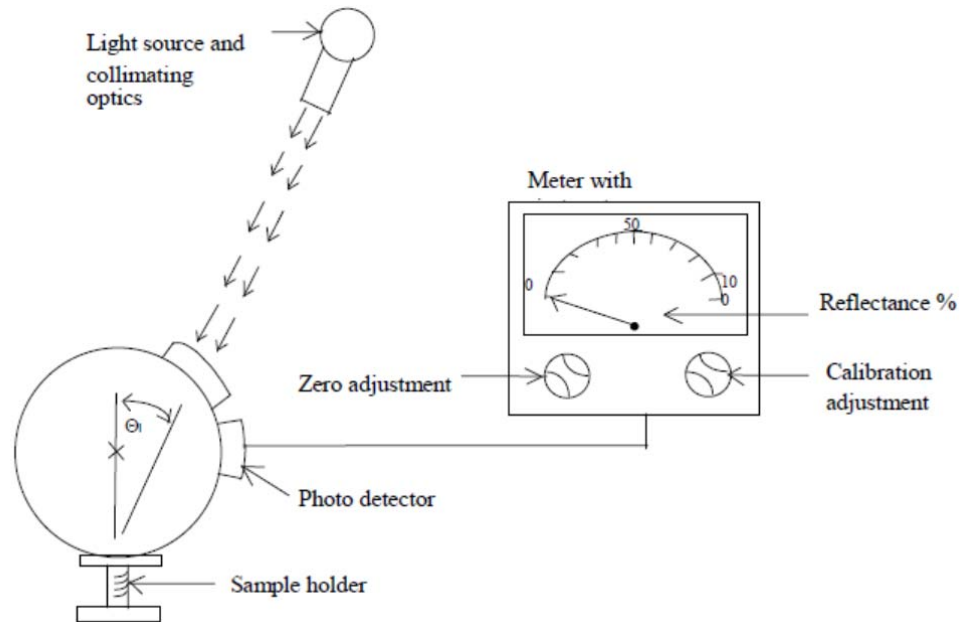
$$\rho = \frac{\Phi_2}{\Phi_1}$$

Where:

$\Phi_1$  = luminous flux of the incident light on the material sample;

$\Phi_2$  = luminous flux of the reflected light (reflectance).

- 2.1. The illumination angle of the luminous flux of the incident light on the sample  $\Theta_i$  shall be equal to  $8^\circ \pm 0.5^\circ$ .
- 2.2. The luminous flux of the incident light on the sample shall be determined by using a diffuse reflectance standard calibrated by an accredited laboratory. The extended measurement uncertainty shall be lower than 3 per cent.
3. Example of an integrating sphere according to CIE 38:1977:



Annex 8

Paragraph 3.3.3., amend to read:

- "3.3.3. ~~(Reserved)~~ These communication devices shall:
- 3.3.3.1. provide either a visual contrast of  $C \geq 0.4$  and a diffuse reflectance  $\rho_d$  of at least 0.5 according to Annex 5 or be white or yellow,
- 3.3.3.2. provide a tactile surface, i.e. protrude from the surrounding areas,
- 3.3.3.3. provide an audible and visible signal to confirm successful activation."

Paragraph 3.5., amend to read:

"3.5. Floor slope

The slope of any gangway, access passage or floor area between any priority seat ~~or wheelchair space~~ and at least one entrance and one exit or a combined entrance and exit shall not exceed 8 per cent. **The slope of any gangway, access passage or floor area between any wheelchair space and at least one entrance and one exit or a combined entrance and exit shall not exceed 5 per cent.** Such sloping areas shall be provided with a slip-resistant surface. **However, in the gangway, access passages or floor area where differently directed slopes merge these limits may be exceeded provided the total amount of these areas is not greater than 25 per cent of the total amount of the area swept by the wheelchair to reach the wheelchair area."**

Paragraph 3.6.1., amend to read:

"3.6.1. For each wheelchair user provided for in the passenger compartment there shall be a special area at least 750 mm wide and 1,300 mm long **and 1,400 mm high**. The longitudinal plane of the special area shall be parallel to the longitudinal plane of the vehicle and the floor surface of the special area shall be slip resistant and the maximum slope in ~~any~~ **forward and rearward** direction shall not exceed 5 per cent. **In the lateral direction the slope shall not exceed 3 per cent. However, at the rear end of the wheelchair area where differently directed slopes merge these limits may be exceeded provided the total amount of these areas is not greater than 25 per cent of the wheelchair area. Furthermore, in the case of a rearward facing wheelchair complying with the requirements specified in paragraph 3.8.4., the slope in the longitudinal direction shall not exceed 8 per cent provided that this slope inclines upwards from the front end to the rear end of the special area.**

In the case of a wheelchair space ... as shown in Annex 4, Figure 22."

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