

LIGHT REFLECTIVE VALUE (LRV)

The Equality Act 2010 (which replaced the 2004 Disability Discrimination Act) requires that all new and refurbished public buildings and work places comply with current regulations via their 'Access Statement', ensuring safe entry, exit and safe passage throughout the building. Obligations regarding building access and usage are covered under BS8300 / Building Regulations Approved Document "M". Failure to comply with the Equality Act could result in building owners and facility managers being fined up to £50,000.

How does it affect finishes?

The regulations mean that people, regardless of disability, age or gender, must be able to gain equal access to public buildings. For visually impaired people this means amongst other things that there must be a good visual contrast between various elements of the building, including doorways, fixtures and fittings. Therefore the contrast between for example doors and walls must achieve a certain level – measured by something called Light Reflectance Value (LRV).

What is Light Reflectance Value?

- LRV is a universal value for 'contrast'
- It measures the proportion of useful light reflected by a coloured object
- It represents a relative light and darkness value rather than an actual colour. Therefore dissimilar colours could have the same LRV
- LRV is measured on a scale of 0 to 100, 0 being perfect absorbing black and 100 being perfect reflecting white (in reality you never find these perfect objects - a bright white would typically have a result of an LRV of 85)

Why do we need Contrast?

Most registered blind people will still have some vision in colour. Only a small percentage (less than 5%) can see nothing at all, and even people within this group will generally have some sensitivity to light and shade.

Ensuring that a minimum of 30 points of LRV difference is specified for adjacent surfaces will in the majority of cases help to ensure that visually impaired people are not discriminated against.

Examples where visual contrast will be required: -

- Door faces and/or frames to walls
- Floors to Walls
- Ceilings to Walls
- Handrails to Walls
- Sanitary fittings to Walls

An example of a scheme that would now meet the guidelines would be light coloured walls, black wall fittings and grey floor thus enabling anybody to easily differentiate between all aspects of the room.

What is the required Specification?

A minimum of 30 points of LRV difference must be specified for adjacent surfaces, according to the Building Regulations Approved Document "M", and whilst there is no resin flooring industry specific test method for determining the LRV of a resin flooring product, BS 8493:2008 +A1:2010 specifies the method of test to determine the LRV (Light Reflectance Value) of different surfaces of materials.

In the past, products have been tested to an American standard (as per the attached), and it should be remembered that other factors can affect the LRV such as gloss or incidence of light.

The table below gives RAL values which may be of assistance:

| Name | LRV | Name | LRV | Name | LRV |
|---------|-----|---------|-----|---------|-----|
| RAL1001 | 48 | RAL4001 | 18 | RAL8001 | 19 |
| RAL1004 | 42 | RAL4005 | 19 | RAL8004 | 14 |
| RAL1005 | 35 | RAL4007 | 6 | RAL8016 | 7 |
| RAL1013 | 72 | RAL5000 | 10 | RAL9001 | 77 |
| RAL1014 | 60 | RAL5002 | 7 | RAL9010 | 86 |
| RAL1018 | 65 | RAL5003 | 6 | RAL1003 | 46 |
| RAL1020 | 30 | RAL6002 | 11 | RAL7004 | 30 |
| RAL2001 | 18 | RAL6005 | 7 | RAL3020 | 15 |
| RAL2004 | 24 | RAL6011 | 21 | RAL5017 | 11 |
| RAL2008 | 30 | RAL6018 | 28 | RAL9003 | 85 |
| RAL3000 | 13 | RAL6021 | 32 | RAL2012 | 25 |
| RAL3005 | 6 | RAL7000 | 27 | RAL5023 | 16 |
| RAL3011 | 8 | RAL7012 | 14 | RAL5024 | 29 |
| RAL3014 | 28 | RAL7016 | 8 | RAL6034 | 39 |
| RAL3018 | 19 | RAL7035 | 59 | RAL9016 | 87 |

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