

Help and advice



Keith Oakes on light reflectance values

What the new BS means for contractors

A NEW British Standard (BS8493) on the measurement of Light Reflectance Values (LRV) was published last month (September 2008). Its development follows years of lobbying by a small group of industry professionals, including myself, who recognised that the absence of a single, accepted method of measurement was impacting negatively on the flooring industry, with wider implications for health and safety, and the creation of inclusive environments.

The use of colour contrast to aid navigation around a building was first examined in detail in Project Rainbow. British Standard BS8300 clarified how colour contrast should be used and Approved Document M (ADM) 2004 of The Building Regulations 2000 recommended a 30 points difference between the LRVs of adjacent surfaces to provide adequate visual contrast.

However, ADM failed to stipulate how LRVs should be measured. With two widely used methods, this has resulted in confusion and potentially dangerous flooring specifications.

So why are LRVs so important?:



Visual contrast is especially important for identifying critical surfaces within a building, such as steps. Stair nosings in a single solid colour, which contrast with the colour of the adjacent flooring, are recommended to signal the change in level and highlight the edge of the stairs.

For people with good vision, differences in either the hue or intensity of colour provide adequate visual contrast. Unfortunately this is not so for all people who are visually impaired. Instead, the amount of light that a surface reflects – or its LRV – is most useful for identifying differences in colour.

The LRV scale runs from 0, which is a perfectly absorbing surface that could be assumed to be totally black, up to 100, which is perfectly reflective and could be the perfect



white. Until now, the LRV could be calculated using different methods of measurement, which could generate different values. If the LRVs of the two adjacent surfaces are determined using different methods of measurement to achieve the recommended 30 points difference, the result could be dangerously inaccurate.

Such was the concern over the absence of a single scale that some laboratories refused to undertake LRV measurements for fear of being held liable, if products measured using the different scales were installed and an accident occurred, due to insufficient visual contrast.

This issue has at last been recognised by government and BS8493 has adopted the 'Y' value as the standard measurement

method. As important, each floorcovering must now carry its own individual LRV test report.

In response, Gradus has already re-measured its entire range of floorcoverings and stair nosings, with all product lines now carrying an LRV report, calculated using the 'Y' value.

Awareness of the new standard is essential if flooring contractors are to have peace of mind, particularly those working on smaller projects where they are involved in the specification process.

Selecting products with the appropriate LRVs to achieve a 30 points difference will aid access for visually impaired people and help to create inclusive environments.

At the same time, choosing to overlook LRVs once the new standard comes into force could have serious liability repercussions, as there is no longer an excuse for failing to achieve visual contrast. **CFJ**

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Mike Harrison on modular construction

Why off-site building is coming on side

ALTHOUGH by no means a new concept, modular or volumetric building has been adopted as a viable component of the current trend towards Modern Methods of Construction (MMC).

The concept of modular buildings has evolved dramatically over the years from simple, basic units to sophisticated, fully functional rooms. The value lies in the off-site manufacturing process, which offers substantial economic, environmental and social advantages over conventional building.

Modular units are pre-assembled under strictly controlled conditions, then delivered to site as a complete unit. They are increasingly being specified for the healthcare, social housing, education and leisure industries as a feasible alternative method of construction.

Wet rooms, bathrooms and showers are particularly suited to this kind of construction as they

can be assembled as pods – usually a non-structural unit used within a load bearing system. Pods were first introduced for multiple occupancy structures, such as hotels and student accommodation.

Advantages include shorter build times – which impacts on overall life cycle costs – safer construction and less wastage of both time and materials on site.

The healthcare environment is a classic example of how modular building has taken hold, where investment into new facilities demands value for money, speed of erection and lengthy maintenance contracts.

Modular construction is helping in many ways – it compresses the build programme so that the decanting of patients and staff is kept to a bare minimum while the completed pods are craned into place. It also reduces the physical strain on the environment, such as transportation, work and

construction vehicles on sites, which are invariably congested and restricted.

Additionally, it also diminishes the drain on the workforce. With the skills shortage, time and money can be lost through conventional build where the lack of a skilled workforce can significantly push up costs through delays and bad workmanship.

Superior quality, however, is one of the key benefits of modular construction as the highest grade materials, products and systems can be incorporated into a modular unit allowing it to meet all of the demands of current environmental, safety and thermal legislation.

Modular units are highly integrated structures. But they still have to comply with relevant legislation to ensure that, when put together as a whole, they provide the same performance as conventional buildings.

In many ways, they tend to surpass the requirements as the

products are installed and incorporated under quality controlled factory conditions and can be rigorously checked at any stage, significantly reducing the amount of snagging and call-backs at a later stage. For PFI projects in particular, where maintenance can stretch over a period of decades, this is particularly pertinent.

The modular building movement is growing apace and more and more specifiers are seeing the advantages of off-site manufacturing in terms of ecology – build times and costs can be significantly reduced and further savings can be enhanced by using the highest quality products such as the Tarkett Safetred range to achieve exceptional durability that can significantly enhance whole life costs. **CFJ**

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