

# Using Light Reflectance Values (LRV)



Reflectance is the proportion of light that a surface reflects compared to the amount of light that falls on that surface. Dark, matt and/or textured surfaces absorb a lot of light and have low light reflectance values. Light, glossy and/or smooth surfaces reflect most of the light that falls on them and have high light reflectance values.

The light reflectance value of an individual colour indicates the amount of light and heat that individual colour will reflect. Black has a light reflectance value of zero and absorbs all light and heat. Surfaces low in light reflectance value are generally very dark and can get very hot (such as the black leather seats in a car). On the other hand, white has a light reflectance value of nearly 100 and keeps a building light and cool. All colours fit between these two extremes. A colour with a light reflectance value of 60 (which means it reflects 60% of the light that falls on it) will reflect more light than a colour with a light reflectance value of 30 (which means it reflects 30% of the light that falls on it).

Light, colour and texture are inherently linked. If you change a room's colour from bright lime green to navy blue, the light reflectance of the room will decrease, making the room appear darker.



Similarly, matt surfaces absorb the light and will appear darker and deeper than glossy reflective surfaces. High reflectance light colours and glossy finishes are ideal for rooms you wish to appear larger, however you may prefer to use low light reflectance darker colours, heavier textures and matt finishes in areas such as dining rooms to draw the walls in and make the room seem cosier.

# Using Light Reflectance Values (LRV) /2



Colours with high light reflectance values such as white will generally last longer than darker colours with low light reflectance values because the light colours reflect some of the sun's harmful energy while the dark colours absorb most of it. Be careful when using very low light reflectance colours on unstable substrates as they can cause warping of the surface. If you are painting over unstable substrates, it is best to use a lighter colour and save the darker low light reflectance colour for accent areas. Substrates such as Harditex generally have a recommended minimum light reflectance value of 40%. MPNZA recommends that the substrate supplier's instruction in regard to LRV be strictly adhered to.



Resene Nero

Light  
reflectance  
value = 14



Resene Hero

Light  
reflectance  
value = 69



Resene  
Spanish White

Light  
reflectance  
value = 71

The darker the colour the lower the LRV. The lighter the colour the higher the LRV

Light reflectance values are particularly difficult to determine from semi-transparent finishes such as wood stains. Light travelling through these finishes gets absorbed and/or is reflected by the underlying timber. A stain applied over Pine will also have a substantially higher light reflectance value than the same stain applied over a darker timber like Kwila. This is why there is not a standard light reflectance value provided for wood stain colours.

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