

TECHNICAL ADVICE

PREPARATION

Burnishing or Marring



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What

What is Burnishing or Marring?

"**Marring**" is the term commonly used to describe shiny patches or polished areas that become evident when painted surfaces have been subjected to abrasion, possibly caused by cleaning or scrubbing to remove dirt or stains.

Another term used to describe this same effect is "**Burnishing**". The definitions provided by AS/NZS 2310 "Glossary of Paint and Painting Terms" are as follows:

1. Shiny or lustrous spots on a paint surface caused by rubbing the painted surface.
2. The polished or glossy appearance on a surface produced by mechanical action.

The "Marring" effect is much more obvious with deeper, darker or more vibrant colours than it is with pastel shades and lighter colours, especially when the darker colours are selected for use on broadwall surfaces such as feature walls and accent areas.

The darker colours will tend to visually highlight any surface imperfections, especially when flat, matt or lower sheen level paints are selected.



Why

When a conventional low sheen level paint surface is abraded (manual or mechanical) the microscopic roughness and jagged edges of the inert pigments that are present to impart the lower gloss become rounded. These rounded or worn pigment particles scatter light quite differently hence the abraded patch looks noticeably shiny or polished.

The darker the colour the lower the Light Reflectance Value (LRV). The combination of low LRV colours used in conjunction with low sheen level paint means less light is reflected (more is scattered) hence any surface abrasions & imperfections become more visible because they look shiny.

Changes in the appearance of dark coloured paint films can also occur after only mild rubbing with even a very soft non-abrasive cloth, tissue or even human skin contact. This change is not caused by any material being rubbed off the paint (not abrasive enough) but rather by material being rubbed onto the paint, thereby changing the way in which light interacts with the surface.

Flat sheen level paints will offer the greatest physical resistance (surface roughness) to mild rubbing thereby providing the greatest opportunity for any foreign materials to become lodged, retained or trapped in the hollows or low points in the microscopic surface texture, which in turn can be quite resistant to washing or rinsing away.

Deep colours are also more prone to "pigment transfer" (colour actually rubbing off) and subsequent surface marking, than lighter colours. This is an industry-wide issue relating to the very high level of coloured tinter being added to either clear base (no opacity) or extra bright base (very low opacity) in order to produce a paint that has adequate depth of colour and opacity or "hiding power".

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The pigment in the coloured tinter sits close to the surface, and being quite soft, it is prone to marking and rubbing off. The higher the tinter level, the greater the tendency to mark. In addition, lower sheen level paints exaggerate the problem due to the lower amount of binder (latex resin) present in the formulation.

How does it occur

The major factors that can lead to burnishing or marring on painted surfaces include;

- Use of deep, dark or vibrant colours in conjunction with flat or matt sheen level paints, especially in high traffic areas.
- Use of low sheen level paints that are incapable of withstanding abrasion or abuse when applied to broadwall surfaces in high traffic areas.
- Frequent washing and/or spot cleaning.
- Using abrasive cleaning agents or tools (scourers) to wash or scrub painted surfaces.
- Furniture or furnishings rubbing against the painted walls.
- Use of lower quality paints that have poor scrub, stain and abrasion resistance.
- Use of low sheen level paints with very high tinter levels.
- “Critical lighting” can also be a contributing factor as it will highlight any marring/burnishing that may be present.

Solution

Whilst darker colours and low sheen level paints of average quality continue to be used in high traffic areas, the surface marking and cleaning difficulty will continue to be an ongoing problem.

Once the painted surface has experienced burnishing or marring it will be very difficult or almost impossible to remove the shiny patches by washing alone. These surface imperfections have become permanent ‘scars’ that will need to be eliminated by sectional repair and repainting of the affected areas.

Care should also be taken to ensure that any shiny patch does not telegraph through the new coat of paint. Refer to the Dulux Technical Advice Note on “Paint Touch-Up” for more insight into how to go about effective repairs and touch-up.

Repainting interior walls with a more abrasion resistant (scrub and stain resistant) paint, such as Wash&Wear® with 101 Barrier Technology, would be a sensible solution.

Prevention

To minimise or avoid burnishing or marring on existing painted surfaces, clean with a very soft damp cloth or sponge and non-abrasive cleansers, such as Ajax Spray ‘n’ Wipe™; then rinse with clean water. The use of a stronger cleaning agent specifically designed for painted surfaces, such as Selleys® Original Sugar Soap, with a soft cloth will generally remove any stubborn grime and dirt build up without the need for heavy surface abrasion.

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For best results, Dulux recommends ultra premium quality Wash&Wear® with 101 Barrier Technology for interior broadwall surfaces. This product range has built-in scrub and stain resistance that allows more frequent & rigorous cleaning methods to be employed without encountering burnishing or marring. In high traffic areas however consider using a low sheen, semi-gloss or gloss rather than a flat or matt sheen level.

Caution: The down-side of using higher sheen level paints on broadwall surfaces is that they tend to visually accentuate any surface imperfections or irregularities and they lessen the chances of achieving an invisible touch-up on areas where minor damage has been repaired.

For really high traffic areas indoors use Dulux Wash&Wear® Super Tough water-based two-pack epoxy (low sheen).

Another method of providing additional protection to the rich or vibrant coloured interior broadwall coatings beneath is to apply a wear resistant clear coating, such as Dulux Professional SteriGuard® Ultra Clear (low sheen).

All heavy wear interior & exterior trim surfaces that require regular cleaning (such as doors, door frames, window sills and skirtings) should be protected with a premium quality water-based Acrylic Enamel, such as Dulux Aquanamel® Gloss or Semi-gloss. This non-yellowing topcoat paint is quite resilient to burnishing or marring as it offers both durability and easier cleaning capability.

References Further information on the influence that gloss or sheen level can have on a paint finish is provided in the Australian Standard AS/NZS 2311 "Guide to the Painting of Buildings" Section 1.10.

Further information on durability issues relating to the use of deep colours is covered in a separate Dulux Technical Advice Note.

Information on the correct & most effective methods to touch-up paintwork can be found in the separate Dulux Technical Advice Note on this subject.

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