



Yellowing of alkyd enamel paints

This Industry Bulletin provides guidance to both builder and painting contractors on the effects of yellowing of alkyd enamel paints to internal surfaces and the contractors' responsibility to alert their clients to this phenomenon.

The Building Commission has fielded a number of complaints and queries regarding the yellowing of white or light coloured paint applied to internal surfaces such as doors, door frames, skirtings, architraves and other trim painted in alkyd enamel paint.

The use of enamel paints to internal surfaces such as door and door frames is a commonly accepted and specified practice in new homes and re-paints. There is nothing wrong with this system, as paint manufacturers promote the use of enamel paints as having superior gloss level, finish and wearing properties.

A characteristic of alkyd enamel paints, particularly lighter colours, is to form a yellow discolouration over time. The yellowing is not detrimental to the performance of the paint film, rather one of aesthetics.

A number of factors can cause the acceleration of the yellowing. The Australian Paint Manufacturers' Federation Inc (APMF) describes yellowing in detail.

"Yellowing, which occurs naturally with age, can also be accelerated by the use of some household cleaners (particularly if ammonia is present). Enamel paints are based on vegetable oils and provide a very tough, hard-wearing coating for interior surfaces. This toughness is achieved through the vegetable oil component reacting with oxygen in the air, drying and hardening.

As a result of this drying process white or pale coloured enamel paints have always tended to yellow with age, particularly in situations where there is poor lighting, eg: sliding cavity doors, or inside or behind cupboards.

The APMF recommends that if white or pale colour enamel is being used the painter should avoid painting at times of high humidity or at very low temperatures (which adversely affect drying) and, for a period of two weeks after application of the alkyd enamel should:

- *ensure maximum ventilation;*
- *avoid applying water based paint in the vicinity of the new enamel work; and*
- *avoid using household cleaners containing high levels of ammonia. The ammonia content can usually be easily ascertained from the label on the cleaner."*

Yellowing of enamel paints, therefore, is a known characteristic within the paint manufacturing, painting and building industries. Steps should be put in place to inform clients and homeowners of this phenomenon.

Building and painting contractors are deemed to be the experts in the building industry, and it is their responsibility to inform homeowners and clients in writing of the potential for alkyd enamel paints to yellow. Alternatively, they need to advise their clients to use an acrylic paint system that is unlikely to yellow.

Unless brought to their attention prior to painting, homeowners may not expect an alkyd enamel surface to yellow prematurely, and a complaint made to the Building Commission regarding this type of discolouration will likely be considered a defect requiring remedy by the contractor.

References

A more detailed explanation and recommended processes can be found in Australian Standard AS/NZS 2311 Guide to the painting of buildings Sections 6.6 and 7.6(h).

Further information on the “Yellowing of Light Coloured Enamel Paints” can also be obtained through the Australian Paint Manufacturers Federation (APMF) fact sheet February 2017.

Disclaimer

The information contained in this bulletin is provided as general information only and should not be relied upon as legal advice or as an accurate statement of the relevant legislation provisions. If you are uncertain as to your legal obligations you should obtain independent legal advice.

July 2017