# **Common Paint Problems**

# **Common Problems with Exterior Painting**

## **Alligatoring**

Patterned cracking in the surface of the paint film resembling the regular scales of an alligator.

## Possible Cause

- Application of an extremely hard, rigid coating, like a solvent-based enamel, over a more flexible coating, like a water-based primer
- Application of a topcoat before the undercoat is dry
- Natural aging of oil-based paints as temperatures fluctuate
- The constant expansion and contraction results in a loss of paint film elasticity

Solution Old paint

should be completely removed by scraping and sanding the surface; a heat gun can be used to speed work on large surfaces, but take care to avoid igniting paint or substrate. The surface should be primed with a high quality water-based primer, then painted with a top quality exterior water-based paint. Dulux recommends Dulux Weathershield X10.

## **Blistering**

Bubbles resulting from localized loss of adhesion and lifting of the paint film from the underlying surface

# Possible Cause

- Painting a warm surface in direct sunlight.
- Application of oil-based or alkyd paint over a damp or wet surface.
- Moisture escaping through the exterior walls (less likely with latex paint than with oil-based or alkyd paint).
- Exposure of latex paint film to dew, high humidity or rain shortly after paint has dried, especially if there was inadequate surface preparation.

# Solution

If blisters go down to the substrate, first try to remove the source of moisture. Remove blisters by scraping, then sanding the surface.

Prime any bare timber with a high quality water-based primer, and repaint with a high quality water-based exterior paint. Dulux recommends Dulux Acrylic Sealer Undercoat and Dulux Weathershield X10.

# Chalking

Formation of fine powder on the surface of the paint film during weathering, which can cause colour fading. Although some degree of chalking is a normal, desirable way for a paint film to wear, excessive film erosion can result in heavy chalking.

#### Possible Cause

- Use of a low-grade, highly pigmented paint.
- Use of an interior paint for an outdoor application.

Solution First, remove

as much of the chalk residue as possible, using a stiff bristle brush (or wire brush on masonry) and then rinse thoroughly with a garden hose; or use power washing equipment. Check for any remaining chalk by running a hand over the surface after it dries. If noticeable chalk is still present, apply a quality solvent-based or water-based primer (or comparable sealer for masonry), then repaint with a quality exterior coating. If little or no chalk remains and the old paint is sound, no priming is necessary and the surface can be repainted with a quality exterior paint. Dulux recommends Dulux Weathershield X10.

# Cracking/Flaking

The splitting of a dry paint film through at least one coat, which will lead to complete failure of the paint. Early on, the problem appears as hairline cracks; later, flaking of paint chips occurs.

# Possible Cause

- Use of a lower quality paint that has inadequate adhesion and flexibility.
- Over thinning the paint or spreading it too thin.
- Poor surface preparation, especially when the paint is applied to bare timber without priming.
- · Painting under hot or windy conditions that make water-based paints dry too fast.

Solution It may be possible to correct cracking that does not go down to the substrate by removing the loose or flaking paint with a scraper or wire brush, sanding to feather the edges, priming any bare spots and repainting.

If the cracking goes down to the substrate, remove all of the paint by scraping, sanding and/or use of a heat gun; then prime and repaint with a quality exterior water-based paint. Dulux recommends Dulux Weathershield X10.

### **Dirt Pickup**

Accumulation of dirt, dust particles and/or other debris on the paint film; may resemble mildew.

#### Possible Cause

- Use of a low quality paint.
- Soil splashing onto the substrate.
- Air pollution, car exhaust and flying dust collecting on house body and horizontal trim.

Solution Wash off all surface dirt before priming and painting. If unsure whether the problem is dirt or mildew, conduct a simple spot-test (see Mildew). Clean off dirt with a scrub brush and detergent solution, followed by a thorough rinsing with a garden hose. Heavier dirt accumulations may require the use of a power washer. While dirt pickup can't be eliminated entirely, top quality exterior latex paints typically offer superior dirt pickup resistance and washability. Also, higher gloss paints are more resistant to dirt pickup than flat paints, which are more porous and can more easily entrap dirt. Dulux recommends Dulux Weathershield X10 Gloss.

# Efflorescence/Mottling

Crusty, white salt deposits, leached from mortar or masonry as water passes through it.

#### Possible Cause

- Failure to adequately prepare surface by removing all previous efflorescence.
- Excess moisture escaping through the exterior masonry walls from the inside.

Solution If excess

moisture is the cause, eliminate the source by repairing the roof, cleaning out gutters and downspouts, and sealing any cracks in the masonry with a high quality, water-based all-acrylic caulk. If moist air is originating inside the building, consider installing vents or exhaust fans, especially in kitchen, bathroom and laundry areas. Remove the efflorescence and all other loose material with a wire brush, power brush or power washer; then thoroughly rinse the surface. Apply a quality water-based or solvent-based masonry sealer and allow it to dry completely; then apply a coat of top quality exterior house paint, masonry paint or elastomeric wall coating. Dulux recommends Weathershield 10 Low Sheen.

# **Fading/Poor Colour Retention**

Premature and/or excessive lightening of the paint color, which often occurs on surfaces with a sunny exposure. Fading/poor colour retention can also be a result of chalking of the coating.

#### Possible Cause

- Use of an interior grade of paint for an outdoor application.
- Use of a lower quality paint, leading to rapid degradation (chalking) of the paint film.
- Use of a paint color that is particularly vulnerable to UV radiation (most notably, certain bright reds, blues and yellows).
- Tinting a white paint not intended for tinting, or over tinting a light or medium paint base.

Solution

fading/poor color retention is a result of chalking, it is necessary to remove as much of the chalk as possible (see Chalking). In repainting, be sure to use a quality exterior house paint in colours recommended for exterior use. Dulux recommends Dulux Weathershield X10.

# Lapping

Appearance of a denser colour or higher gloss where wet and dry layers overlap during paint application.

Possible Cause Failure to maintain a 'wet edge' when applying paint.

Solution Maintain a wet edge when painting by applying paint toward the unpainted area and then back into the just-painted surface. This technique (brushing from "wet to dry," rather than vice versa) will help produce a smooth, uniform appearance. It is also wise to minimize the area being painted and plan for interruptions at a natural break, such as a window, door or corner (especially important when applying stain to bare wood). Solvent-based paints generally have superior wet edge properties.

#### Mould

Black, gray or brown areas on the painted surface.

#### Possible Cause

- Forms most often on areas that tend to be damp, and receive little or no direct sunlight (the underside of eaves are particularly vulnerable).
- Use of a lower quality paint.
- Failure to prime bare wood before painting.
- Painting over a substrate or coating on which mould has not been removed.

Solution Test for mould by applying a few drops of household bleach to the discoloured area; if it disappears, it is probably mildew. Remove all mildew from the surface by scrubbing with a diluted household bleach solution (one part bleach, three parts water); wear rubber gloves and eye protection. Power washing is also an option. Rinse thoroughly, prime any bare timber, then apply one or two coats of top quality exterior paint. Dulux recommends Dulux Weathershield X10.

# **Nail Head Rusting**

Reddish-brown stains on the paint surface.

# Possible Cause

- Non-galvanized iron nails have begun to rust, causing bleed-through to the top coat.
- Non-galvanized iron nails have not been countersunk and filled over.
- Galvanized nail heads have begun to rust after sanding or excessive weathering.

Solution When

painting new exterior construction where non-galvanized nails have been used, it is advisable to first countersink the nail heads, then caulk them with a top quality, water-based all-acrylic caulk. Each nail head area should be spot primed, then painted with a quality latex coating. When repainting exteriors, where nail head rusting has occurred, wash off rust stains, sand the nail heads, then follow the same surface preparation procedures as for new construction.

## **Peeling**

Loss of paint due to poor adhesion. Where there is a primer and top coat, or multiple coats of paint, peeling may involve some or all coats.

#### Possible Cause

- Seepage of moisture through uncaulked joints, worn caulk or leaks in roof or walls.
- Excess moisture escaping through the exterior walls (more likely if paint is solvent-based).
- Inadequate surface preparation.
- Use of lower quality paint.
- Applying a solvent-based paint over a wet surface.
- Earlier blistering of paint (see Blistering).

Solution Try to

identify and eliminate the cause of moisture (see Efflorescence and Mottling). Prepare surface by removing all loose paint with scraper or wire brush, sand rough surfaces, prime bare timber. Repaint with a top quality water-based exterior paint for best adhesion and water resistance. Dulux recommends Dulux Acrylic Sealer Undercoat and Dulux Weathershield X10.

#### Poor Alkali Resistance

Colour loss and overall deterioration of paint film on fresh masonry.

Possible Cause Coating was applied to new masonry that has not cured for a full year. Fresh masonry is likely to contain lime, which is very alkaline. Until the lime has a chance to react with carbon dioxide from the air, the

Solution

alkalinity of the masonry remains so high that it can attack the integrity of the paint film.

masonry surfaces to cure for at least 30 days, and ideally for a full year, before painting. If this is not possible, apply a quality, alkali-resistant sealer or water-based primer, followed by a top quality 100 percent acrylic exterior paint. The acrylic binder in these paints resists alkali attack. Dulux recommends Dulux Weatehrshield X10.

# **Poor Gloss Retention**

Deterioration of the paint film, resulting in excessive, or rapid loss of lustre of the topcoat.

#### Possible Cause

- Use of an interior paint outdoors.
- Use of a lower quality paint.
- Use of solvent-based paint in areas of direct sunlight.

Solution Direct sunshine can degrade the binder and pigment of a paint, causing it to chalk and lose its gloss. While all types of paint will lose some degree of lustre over time, lower quality paints will generally lose gloss much earlier than better grades. The binder in top quality acrylic latex paint is especially resistant to UV radiation, while solvent-based binders actually absorb the radiation, causing the binders to break down. Surface preparation for a coating showing poor gloss retention should be similar to that used in chalking surfaces (see Chalking).

# **Surfactant Leaching**

Concentration of water-soluble ingredients on water-based paint, creating a blotchy, sometimes glossy appearance, often with a tan or brownish cast. More likely with tinted paints than with white or factory-coloured paints.

#### Possible Cause

- Painting in cool, humid conditions or just before they occur. The longer drying time allows the
  paint's water-soluble ingredients which would normally evaporate, or be leached out by
  rain or dew to rise to the surface before paint thoroughly dries.
- Contact of mist, dew or other moisture with the painted surface shortly after it has dried.

Solution Avoid painting in the late afternoon if cool, damp conditions are expected in the evening or overnight. If the problem occurs in the first day or so after the paint is applied, the water-soluble material can sometimes be rinsed off rather easily. Fortunately, even more stubborn cases will generally weather off in a month or so. Surfactant leaching should not affect the ultimate durability of the coating.

#### **Tannin Staining**

Brownish or tan discoloration on the paint surface due to migration of tannins from the substrate through the paint film. Typically occurs on 'staining timbers,' such as redwood, cedar and mahogany, or over painted knots in certain other timer species.

# Possible Cause

- Failure to adequately prime and seal the surface before applying the paint.
- Use of a primer that is not sufficiently stain-resistant.
- Excess moisture escaping through the exterior walls, which can carry the stain to the paint surface.

Solution Correct any

possible sources of excess moisture (see Efflorescence and Mottling). After thoroughly cleaning the surface, apply a high quality stain-resistant solvent-based or water-based primer. Solvent-based stain-resistant primers are the best type to use on severely staining boards. In extreme cases, a second coat of primer can be applied after the first has dried thoroughly. Finish with a top quality water-based paint. Dulux recommends Dulux Oil Based Sealer Undercoat and Dulux Weathershield X10.

# Wrinkling

A rough, crinkled paint surface occurring when paint forms a 'skin.'

#### Possible Cause

- Paint applied too thickly (more likely when using solvent-based paints).
- Painting a hot surface or in very hot weather.
- Exposure of uncured paint to rain, dew, fog or high humidity levels.
- Applying the topcoat to insufficiently dried first coat.
- Painting over contaminated surface (e.g., dirt or wax).

Solution Scrape or

sand substrate to remove wrinkled coating. Repaint, applying an even coat of top quality exterior paint. Make sure the first coat or primer is dry before applying the topcoat. Apply paints at the manufacturer's recommended spread rate (two coats at the recommended spread rate are better than one thick coat). When painting during extremely humid, cool or damp weather, allow extra time for the paint to dry completely.

# **Common Problems with Interior Painting**

# **Blocking**

Undesirable sticking together of two painted surfaces when pressed together (e.g., a door sticking to the jamb).

#### Possible Cause

Not allowing sufficient dry time for the coating before closing doors or windows. Use of low quality semi-gloss or gloss paints.

### Solution

Use a premium semi-gloss or gloss acrylic enamel paint. Low quality semi gloss and gloss water-based paints can have poor block resistance, especially in warm, damp conditions. Follow paint label instructions regarding dry times. Acrylic enamel paints have better early block resistance than vinyl latex paints, or solvent-based enamel paints. Application of talcum powder can relieve persistent blocking. Dulux recommends Dulux Aquanamel.

## **Burnishing**

Change in gloss of the paint film when subjected to rubbing, scrubbing or having an object brush up against it.

## Possible Cause

- Use of flat paint in highly trafficked areas, where a higher sheen level would be desirable.
- Frequent washing and spot cleaning.
- Objects (furniture, for example) rubbing against the walls.
- Use of lower grades of paint with poor stain and scrub resistance (see Poor Stain Resistance and Poor Scrub Resistance).

## Solution

Paint heavy wear areas that require regular cleaning (e.g., doors, window sills and trim) with a premium semi gloss or gloss acrylic enamel. This type of paint offers both durability and easier cleaning capability. In high traffic areas, choose a low sheen, semi-gloss or gloss rather than a flat sheen level. Clean painted surfaces with a soft damp cloth or sponge and non-abrasive cleansers; rinse with clean water. Dulux recommends Dulux Wash and Wear.

# Cracking/Flaking/Peeling

The splitting of a dry paint film through at least one coat as a result of aging, which ultimately will lead to complete failure of the paint. In its early stages, the problem appears as hairline cracks; in its later stages, flaking and/or peeling occurs.

# Possible Cause

- Use of a lower quality paint that hasinadequate adhesion and flexibility.
- Over thinning or overspreading the paint.
- Inadequate surface preparation, e.g. not applying a sealer or primer on porous surfaces prior to top coating.
- Poor adhesion of the underlying coat/s.
- Excessive hardening and embrittlement of alkyd paint as the paint job ages.

#### Solution

Remove all loose and flaking paint with a scraper or wire brush, sand the surface and feather the edges. If the flaking occurs in multiple layers of paint, use of a filler may be necessary. Prime bare timber areas before repainting. Use of a premium quality primer and topcoat should prevent a recurrence of the problem. Dulux recommends Dulux Acrylic Primer Undercoat and Dulux Wash and Wear.

# Foaming/Cratering

Formation of bubbles (foaming) and resulting small, round concave depressions (cratering) when

bubbles break in a paint film, during paint application and drying.

#### Possible Cause

- Shaking a partially filled can of paint.
- Use of low quality paint or very old latex paint.
- Applying (especially rolling) paint too rapidly.
- Use of a roller cover with wrong nap length.
- Excessive rolling or brushing of the paint.
- Applying a gloss or semi-gloss paint with a long nap roller.

# Solution

All paints will foam to some degree during application; however, higher quality paints are formulated so the bubbles break while the paint is still wet, allowing for good flow and appearance. Avoid excessive rolling or brushing of the paint or using paint that is more than a year old. Apply gloss and semi-gloss paints with a short nap roller.

### Lapping

Appearance of a denser colour or increased gloss where wet and dry layers overlap during paint application.

## Possible Cause

- Failure to maintain a 'wet edge' when painting.
- Use of a low solids 'economy' paint.

### Solution

Maintain a wet edge when painting by applying paint toward the unpainted area and then back into the just-painted surface. This technique (brushing or rolling from 'wet to dry,' rather than vice versa) will produce a smooth, uniform appearance. It is also wise to work in manageable-size areas and plan for interruptions at a natural break, such as a window, door or corner. Using a top quality water-based paint makes it easier to avoid lapping problems because higher solids (pigments and binder) content makes lapped areas less noticeable. If substrate is very porous, it may need a primer/sealer to prevent paint from drying too quickly, reducing wet edge time and therefore making lapped areas noticeable. Solvent-based paints generally have superior wet edge properties, and therefore less lapping.

#### Mould

Black, grey or brown spots on the painted surface.

#### Possible Cause

• Forms most often on areas that tend to be damp, or receive little or no direct sunlight (e.g., bathrooms, kitchens and laundry rooms).

- Use of flat or matt paints in areas subject to moisture.
- \* Use of low quality latex paint.
- Failure to prime a bare wood surface before applying the paint.
- Painting over a substrate or coating on which mildew has not been removed.

## Solution

Test for mildew by applying a few drops of household bleach to the area; if it is bleached away, the discolouration is probably mildew. Remove all mildew from the surface by scrubbing with a diluted household bleach solution (one part bleach, three parts water), while wearing rubber gloves and eye protection. Rinse thoroughly. To protect against mildew, use a premium quality water-based paint, and clean when necessary with bleach/ detergent solution. Consider installing an exhaust fan in high moisture areas. If the area is subject to frequent moisture, e.g. bathrooms, use Dulux Wash & Wear Kitchen & Bathroom or Dulux Mouldshield to discourage the growth of mildew.

# **Mud Cracking**

Deep, irregular cracks resembling dried mud in dry paint film.

#### Possible Cause

- Paint is applied too thickly, usually over a porous surface.
- Paint is applied too thickly, to improve inherent poor hiding (coverage) of a lower quality paint.
- Paint is allowed to build up in corners upon application.

# Solution

Remove coating by scraping and sanding. Prime and repaint, with a premium water-based paint, and a roller with appropriate nap length. Sanding the surface smooth before repainting with a premium water-based paint can also repair mud-cracked areas. Premium quality paints have a higher solids content, which reduces the tendency to mud crack. They also have very good application and hiding properties, which minimises the tendency to apply the paint too thickly. Dulux recommends Dulux Wash and Wear.

# **Picture Framing**

An effect of non-uniform colour, or sheen level, that can appear when a wall is painted with a roller, but is brushed at the edges and corners. The brushed areas generally appear darker, resembling the 'frame' of a 'picture.' Also, sprayed areas may be darker than neighbouring sections that are brushed or rolled.

# Possible Cause

Usually a hiding (coverage) effect. Brushing will generally result in lower spread rates than rolling,

producing a thicker film and more hiding.

• Adding colourant to a non-tintable paint, or using the wrong type, or level, of colourant.

#### Solution

Make sure that spread rates with brushes and rollers are similar. Don't cut in the entire room before roller coating. Work in smaller sections of the room to maintain a 'wet edge.' With tinted paints, be sure the correct colourant-base combinations are used. Factory colours, as well as in-store tints, should be thoroughly shaken at time of sale, and the product must be thoroughly stirred prior to use.

## Poor Flow/Leveling

Failure of paint to dry to a smooth film, resulting in unsightly brush and roller marks after the paint dries.

#### Possible Cause

- Use of lower quality paint.
- Application of additional paint to 'touch up' partially dried painted areas.
- Re-brushing or re-rolling partially dried painted areas.
- Use of the wrong type of roller cover or poor quality brush.

#### Solution

Use premium quality water-based paints, which are generally formulated with ingredients that enhance paint flow. Brush and roller marks thus tend to 'flow out' and form a smooth film. When using a roller, be sure to use a cover with the recommended nap length for the type of paint being used. Use of a high quality brush is important; a poor brush can result in bad flow and levelling.

# **Poor Hiding**

Failure of dried paint to obscure or 'hide' the surface to which it is applied.

#### Possible Cause

- Use of a low quality paint.
- Use of low quality tools/wrong roller cover.
- Use of an improper combination of tinting base and tinting colour.
- Poor flow and leveling (see Poor Flow/Leveling).
- Use of a paint that is much lighter in colour than the substrate, or that primarily contains low-hiding organic pigments.
- Application of paint at a higher spread rate than recommended.

# Solution

If the substrate is significantly darker or is a patterned wallpaper, it should be primed before applying a top coat. Use a premium quality paint for better hiding and flow. Use quality tools; use the recommended roller nap, if rolling. Follow manufacturer's recommendation on spread rate; if using tinted paint, use the correct tinting base. Where a low-hiding organic colour must be used, apply a primer first. Dulux recommends Dulux Acrylic Primer Undercoat.

#### **Poor Scrub Resistance**

Wearing away or removal of the paint film when scrubbed with a brush, sponge, or cloth.

#### Possible Cause

- Choosing the wrong sheen for the area.
- Use of a lower quality paint.
- Use of an overly aggressive scrub medium (see also Burnishing).
- Inadequate dry time allowed after application of the paint before washing it.

#### Solution

Areas that need frequent cleaning require a highly washable premium quality paint formulated to provide such performance. High traffic areas may require a low sheen, semi-gloss or gloss paint rather than a flat paint to provide good scrub resistance. Allow adequate dry time, as scrub resistance will not fully develop until the paint is thoroughly cured. Typically, this will be one week. Try washing the painted surface with the least abrasive material and mildest detergent first. Dulux recommends Dulux Wash and Wear.

# **Poor Sheen Uniformity**

Shiny spots or dull spots (also known as 'flashing') on a painted surface; uneven gloss.

# Possible Cause

- Uneven spread rate.
- Failure to properly prime a porous surface, or surface with varying degrees of porosity.
- Poor application resulting in lapping (see Lapping).

#### Solution

New substrates should be primed/ sealed before applying the top coat to ensure a uniformly porous surface. Without the use of a primer or sealer, an extra coat of paint will more likely be needed. Make sure to apply paint from 'wet to dry' to prevent lapping. Often, applying an additional coat will even out sheen irregularities.

#### **Poor Stain Resistance**

Failure of the paint to resist absorption of dirt and stains.

#### Possible Cause

- Use of lower quality paint that is porous in nature.
- Application of paint to unprimed substrate.

#### Solution

Higher quality water-based paints contain binders that have been formulated to help prevent stains from penetrating the painted surface, allowing for easy removal. Priming new surfaces reduces porosity, and therefore, ensures maximum film thickness of a premium top coat, providing very good stain removability. Dulux recommends Dulux Acrylic Primer Undercoat and Dulux Wash and Wear.

# Roller Marks/Stipple

Unintentional textured pattern left in the paint by the roller.

## Possible Cause

- Use of incorrect roller cover.
- Use of lower grades of paint.
- Use of low quality roller.
- Use of incorrect rolling technique.

# Solution

Use the proper roller cover; avoid too long a nap for the paint and the substrate. Use quality rollers to ensure adequate film thickness and uniformity. High quality paints tend to roll on more evenly due to their higher solids content and levelling properties. Use water to pre-dampen roller covers to be used with water-based paint; shake out excess water. Don't let paint build up at roller ends. Begin rolling at a corner near the ceiling and work down the wall in three-foot square sections. Spread the paint in a zigzag 'M' or 'W' pattern, beginning with an upward stroke to minimise spatter; then, without lifting the roller from the surface, fill in the zigzag pattern with even, parallel strokes.

## **Roller Spattering**

Tendency of a roller to throw off small droplets of paint during application.

#### Possible Cause

- Incorrect rolling technique; applying paint too rapidly
- Use of a low quality roller or incorrect roller cover.
- Use of lower grades paints.

# Solution

Higher quality paints are formulated to minimize spattering. Using high quality rollers, with the appropriate nap length, can help. Overloading the roller with paint will result in excess spatter, as will overworking the paint once it is applied to a substrate. Working in three-feet square sections, applying the paint in a zigzag 'M' or 'W' pattern, and then filling in the pattern, will also lessen the likelihood of spattering.

## Sagging

Downward "drooping" movement of the paint film immediately after application, resulting in an uneven coating.

#### Possible Cause

- Application of a heavy coat of paint.
- Application in excessively humid and/or cool conditions.
- Application of over-thinned paint.
- Airless spraying with the gun too close to the substrate being painted.

#### Solution

If paint is still wet, immediately brush out or re-roll to redistribute the excess evenly. If the paint has dried, sand and reapply a new coat of top quality paint. Correct any unfavourable conditions: Do not thin the paint; avoid cool or humid conditions; sand glossy surfaces. Paint should be applied at its recommended spread rate; avoid 'heaping on' the paint. Two coats of paint at the recommended spread rate are better than one heavy coat, which can also lead to sagging. Consider removing doors to paint them supported horizontally.

# **Surfactant Leaching**

Concentration of water-soluble ingredients on water-based paint, creating a blotchy, sometimes glossy appearance, often with a tan or brownish cast. More likely with tinted paints than with white or factory-coloured paints.

# Possible Cause

- Painting in cool, humid conditions or just before they occur. The longer drying time allows the
  paint's water-soluble ingredients which would normally evaporate, to rise to the surface
  before paint thoroughly dries.
- Exposure to steam or condensation before adequate curing time can also lead to this issue.

# Solution

Ensure the temperature in the room is above 10 degrees while painting and during the curing time. Keep airflow up during the drying phase with fanheaters and open windows. Do not expose paint to condensation for 48 hours after painting. If the problem occurs the water-soluble material can be

washed off with a mild detergent and water but should be done as soon as it is noticed. Surfactant leaching should not affect the ultimate durability of the coating.

# Wrinkling

A rough, crinkled paint surface, which occurs when uncured paint forms a 'skin.'

#### Possible Cause

- Paint applied too thickly (more likely when using alkyd or oil-based paints).
- Painting during extremely hot weather or cool damp weather, which causes the paint film to dry faster on top than on the bottom.
- Exposing uncured paint to high humidity levels.
- Applying top coat of paint to insufficiently cured primer.
- Painting over contaminated surface (e.g., dirt or wax).

#### Solution

Scrape or sand substrate to remove wrinkled coating. If using a primer, allow it to dry completely before applying top coat. Repaint (avoiding temperature/ humidity extremes), applying an even coat of top quality interior paint.

#### Yellowing

Development of a yellow cast in aging paint solvent-based enamels; most noticeable in the dried films of white paints or clear varnishes.

# Possible Cause

- Oxidation of alkyd or oil-based paint or varnish.
- Heat from stoves, radiators and heating ducts.
- Lack of light (e.g., behind pictures or appliances, inside closets, etc.).

## Solution

Top quality water-based paints do not tend to yellow, nor does non-yellowing varnish. Solvent-based paints, because of their curing mechanism, do tend to yellow, particularly in areas that are protected from sunlight. To prevent yellowing, use a premium quality water-based paint in place of solvent-based paint. Dulux recommends Dulux Aquanamel.