

Use of thinner

Scope

This document describes in general terms when to use thinner and when not to use thinner.

Safety precautions

Use adequate personal safety equipment and follow sound procedures. Apply only in well ventilated areas. Observe safety labels on packaging and paint containers and consult Hempel's Safety Data Sheets for the products to be applied.

Introduction

Solvent in a paint has one main purpose, to help getting the paint out of the can and onto the surface to be painted. Generally, once the paint is on the surface, the solvent evaporates.

Apart from a few special situations, thinning is not necessary. Paints are designed to be applied out of the can, so once the paint has been thoroughly mixed (together with a curing agent if appropriate), there should not normally be a need for the addition of thinner.

There are general reasons for when to use thinner and when not to use thinner.

When to use thinner

Brush and roller marks

Heavy duty paints are often made viscous or 'thick' to enable application of high film thicknesses in one go.

However, when applied manually using brush or roller, the high viscosity often results in brush or roller marks left in the surface of the paint.

Adding a small amount of thinner (just a few percent) will lower the viscosity, help flow of the paint and result in a smoother surface when applied manually. An alternative to using thinner to avoid marks, is not to brush or roll the surface excessively.

Flow

Thick paint may have difficulty in flowing down into a very even surface. Adding a very small amount of thinner will help this flow and ease the distribution of paint on the surface.

How to add thinner

In general, do not add thinner to the mixed paint to start with and never to the separate paint components.

Initially, mix the paint thoroughly at the correct temperature (around 20°C [68°F]) and try the application before adding any thinner.

If viscosity is still too high for proper application, start by adding thinner gradually since (obviously) too much added thinner cannot be removed again.

When not to use thinner

Temperature

When paint is cold (< 10°C [50°F]), it will be thicker than normally. In this case, addition of thinner is not the solution to reduce viscosity. Instead, cans shall be transferred to a warmer place so that the paint obtains a temperature of around 20°C [68°F] before mixing. This will lower the viscosity and make application easier.

Film thickness

Thinning the paint might seem to make the application quicker, but the film that is applied will be of lower thickness and more coats will be needed to provide the proper protection.

Sagging

Thinning the paint will increase the chances of sagging when a high film thickness is applied. When the paint sags, there will be very little paint above the sag and too much paint on the sag.

Topcoats

Note that many topcoats or finishing coats have a lower viscosity than other paint types. Most often, it is not necessary to thin these paints.

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