Brush and roller application

Introduction

In general, it is recommended to apply the majority of Hempel's coatings by spraying. Application by brush and/or roller is primarily preferred for touch-up during repair and for smaller areas where spraying for practical, environmental or other reasons is not possible. See also Hempel's Technical Guideline stripe coating.

Application with brush and/or roller, also known as manual application, requires special attention to ensure proper adhesion, sufficient film build and best appearance.

Safety

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.

Scope

This guideline is valid for brush and roller application of most of Hempel's coatings. If a product cannot be applied by brush and/or roller, this will generally be indicated in the Product Data Sheet.

The guideline provides general recommendations only, hence the information should be supplemented with more details regarding the actual product as outlined in the Product Data Sheet and/or in the Hempel specification.

Equipment

For brush and roller application, only use tools that are suited for the specific paint type and solvent. Some rollers and brushes may be damaged by the strong solvents used in e.g. epoxy coatings.

New tools must be prewashed, dry and free from loose hair, fibres, dust, fluff, etc. Cleaning with solvent and drying is highly recommended.

For cleaning a new roller, it is particularly recommended to use the "tape" method: The roller is cleaned by rolling it several times on the sticky side of the tape surface to remove loose fibres and fluff from the fabric.

Surface preparation

It is recommended to check the specification for pre-treatment recommendation prior to application and/or the Hempel's Technical Guidelines for surface preparation.

Thinning

Typically, manual application requires the paint to be diluted to a higher extent than for spraying. As an example, a product ready for airless spraying may require 5-10% thinning to achieve optimum flow properties for manual application.

Note that thinning decreases the volume solids of the mixed paint. Therefore, extra paint must be used during application to achieve the correct film thickness. Thinning will make the paint run or sag more easily on vertical surfaces.

Use the thinner recommended in the Product Data Sheet; a wrong thinner may negatively affect the properties of the paint.

For multi-component products, add the thinner to the mixed product, not to the individual components. Do not exceed the recommended maximum percentage.

Thinning topcoats
Application with brush or roller will result in a more uneven paint film finish. This can to some extend be counteracted by thinning and application of more coats.

Levelling of Hempathane and Hempaxane products can be improved using Hempel's brush and roller agent 99140 typically up to 5% (v/v). See separate product data sheet.

Pinholes & bubbling in Hempathane and Hempadur (typically during stripe-coating) may be reduced by adding 2% (v/v) Hempel's Brush Agent 99840. See separate product data sheet.

Application

Apply the product in accordance with the specification and the Product Data Sheet. If multiple layers are needed to achieve the specified thickness, it is possible to overcoat when the previous layer is dry to touch. The minimum overcoating interval for the full thickness does not apply.

Pay attention to the pot life for multi-component products. Do not use the product after the pot life has expired, even if the mixture seems workable after adding extra thinner. Pot life cannot be extended by thinning and the adhesion of the paint will be seriously affected.

When pot life has expired, make sure that brush and roller fleece are discarded and replaced or thoroughly cleaned before continuing with the application.

For application of primer, it is recommended to use brush instead of roller since a brush can work the primer better into the substrate.

Brush application
The brush should not be dipped deeply into the paint as this will overload the bristles and fill the brush heel with paint, which is difficult to remove during cleaning.

The brush should be held at an angle of about 45° to the surface during stroking. Several light strokes will transfer most of the paint to the surface - do not apply excessive pressure. Distribute the paint to an even uniform layer by applying long light strokes, followed by as few strokes as possible to achieve a smooth surface. If the surface is uneven, the brush may be used at a 90° angle to make the final touch.

Roller application
Make sure the roller is wetted properly and filled with paint. Do not overfill so paint is spilled or splashed onto the surface. It is recommended to use a designated roller tray instead of dipping the roller into the paint can.

Apply the paint without extensive force. Keep enough materiel on the roller to transfer the product properly to the surface and make sure the roller does not become dry. Avoid rolling too fast since paint may spurt from the roller.

To build up the film thickness, it may be necessary to apply the paint in multiple layers. It is important that the underlying layer is dry enough to be overcoated, otherwise it may “roll off”. When applying physical drying paints, take care to roll quickly forward as the preceding coat may soften and dissolve and be mixed into the new coat if the new coat is worked to extensively.

Cleaning of equipment

Both rollers and brushes may be cleaned using the tool cleaner or cleaning thinner recommended in the Product Data Sheet.

This document is intended for professional use and provides generic advice in respect of the subject matter only. It is not intended to be used as a comprehensive guide. The buyer/applicator should always read the relevant Product Data Sheet (“**PDS**”) and Safety Data Sheet (“**SDS**”) relating to the Products ordered which are available for download on www.hempel.com. If in doubt, please contact your local Hempel representative for further advice. To the extent relevant, the disclaimer set out in the relevant PDS(s) applies to this document.