

Remmers Information Sheet

Milky spots on wet surfaces – coalescing solvents

The water based exterior coatings from Remmers are made of a special resin that allows the controlled passage of moisture in and out of the timber, often referred to as a “breathable or microporous coating”. This resin dries very quickly when applied as a thin layer but more slowly in thicker layers.

The resins used in water-borne coatings are not fully through dried or cured after the initial drying phase and it can take days or even weeks before full through drying has taken place. Windows or doors are often installed or left out in the weather before this curing process has taken place and occasionally, during the first days or weeks on site, milky looking spots can form on the surface after consistent rain.

A small amount of solvent is present in a water based coating called a coalescing solvent. This allows the resin in the coating to form a continuous and smooth weather protective film. As the coalescing solvent is providing this vital film forming function, it is gradually lost from the coating. Any coalescing solvent that is still present in the film can react with any appreciable moisture that gets into the film.

This reaction creates the milky appearance. This blemish is not a defect and there is no reason to worry. Most importantly, nothing needs to be done about it. As the water dries from the coating the milky spots will subside. Once the coating is fully through dried the milky spots will not return even after heavy rain fall.



Formation of milky spots caused by water on a freshly coated surface.

Traditionally water borne coatings could take weeks at a temperature of 15°C and relative humidity of 60% to fully through dry. With the more advanced formulations now made by Remmers the through drying can take as little as 72 hours. The through drying is affected by film thickness, so if the coating is slightly thicker than normal the milky spotting effect is more likely to happen. Even if the film has not dried as effectively as desired, because of colder drying conditions or higher film thickness, the coating will eventually function to its maximum capability.

For further advice contact the Remmers Woodcoating Technical Team.

This has been prepared based on Remmers' current knowledge and experience of current best practice in the fields of coating application, timber technology and joinery and building design. Such best practice advice is always subject to change. Remmers cannot be responsible for the application of the coating and the extent to which our customers adhere to this best practice. In case of changes in the parameters of the application, such as changes in substrates, or in case of a different application, consult Remmers' Technical Team prior to using Remmers products. Any quantities shown are for guidance only and the user must allow for variations in temperature, surface profile, absorbency and wastage. The user of the product must test the product's suitability for the intended application and purpose. Except as expressly stated in writing Remmers' warranty is governed exclusively by our current Standard Terms and Conditions of Sale. In particular, Remmers does not warrant the correct application of its products.