

## Door Care and Painting in the Winter Months Using Water Based Paints

As the weather gets colder and wetter, it becomes significantly more important to treat doors with care. In particular, careful preparation and strict adherence to paint manufacturers application specifications is of the utmost importance.

Superior Doors and all leading Paint Manufacturers have tested their products extensively. The result is a set of clear guidelines set down by paint manufacturers for the application of their paints onto MDF and timber for reliable outcomes. **Failure to comply with paint manufacturers application specifications will almost certainly lead to undesirable outcomes.** This is not a door manufacturing or raw material fault, and any claims against Superior Doors will be rejected.

### Door Care and Painting Superior Doors.

Whilst the below is true and required by warranty throughout the year, it becomes even more important May - November.

- 1- Doors must be thoroughly sealed on all 4 edges and both faces within 7 days of arriving to site.
  - a. Unless the doors are sealed thoroughly within 7 days of arriving to site, the warranty will be void.
- 2- For premium paint finishes, careful preparation of the door before painting is critically important, including the stiles, faces and any grooves.
  - a. UV sealer is a very thin, hard and water resistant sealer. **It is recommended for premium paint finishes, that the Superior Doors Ltd UV primer is given a light sand with sand paper no courser than 240 Grit.** Sand paper courser than 240 grit could scratch through the primer and lead to raised scratches in the top coat of the door. **This is not a fault of the door, and will not be covered under warranty.**
- 3- All paint manufacturers application instructions, specifications and environmental conditions must be strictly adhered too. This includes, but is not limited to the following.
  - a. **Minimum atmospheric temperatures during the application and drying process.**
    - i. **Typically DO NOT PAINT in conditions where the temperature is less than 10 degrees during application or where it will likely drop below 10 degrees during the drying process.**
    - ii. Simply painting at the end of the day to leave the doors longer overnight to dry is exactly the wrong thing to do!
  - b. **Minimum atmospheric relative humidity during the application and drying process**
    - i. The reason relative humidity is important, is because as it gets colder, the maximum amount of water vapour the air can hold rapidly decreases. Meaning it becomes significantly harder for paints to cure.
    - ii. **DO NOT PAINT in conditions where the relative humidity is too high, generally 80% maximum.**
  - c. **Maximum dilution rates.**
    - i. When it is colder, paint is thicker. The obvious solution to this is to water down paints more, so that the painter can effectively spray the paint through their gun. This is the exact opposite of what the painter should be doing.
  - d. **Adequate Ventilation**
    - i. At any given temperature, air can only hold a specific amount of water (relative Humidity), when that limit is reached, no further drying can take place in such a saturated environment.
    - ii. **It is critical that where there is any painting taking place, that there is adequate ventilation to move the saturated air out, and bring dryer air in.**
    - iii. It is increasingly common in new builds during the painting process to do the exact opposite of this. Painters completely seal out the interior of the house and spray everything all at once. Whilst this might be fine for porous materials such as fibre cement board, it is detrimental to the timber rails and stile and MDF facings used for interior doors.

As previously mentioned, paints are thoroughly tested by their manufacturer and are designed to work within certain conditions. The formula is extremely simple, the water in the paint needs to cure through evaporation. If it is too cold, too humid, there is not adequate ventilation or the paint is watered down too much, the paint cannot cure through evaporation as the paint manufacturer has designed it too. Instead, the moisture/water within the paint will absorb into the dry door.

Competent painters will be aware of the problems associated with using water based paints in cold and damp environments. Painters should carry as part of their standard kit, a digital Thermometer/Hygrometer. These are a very simple and effective digital meter that monitors temperature and humidity of the surrounding environment. These are readily available from stores such as Jaycar for less than \$30. Even better is a data logging version that records the readings over time. A data logging version can be purchased for less than \$60. These temps and humidity readings should be recorded as part of a job sheet for each painting day on that site.

Most, if not all places in New Zealand will have periods throughout the year where the building site does not meet the minimum application requirements stipulated by the paint manufacturers. Some areas may have many weeks or months in a row where the temperature and or humidity does not meet the minimum requirements of the paint manufacturers. **PLEASE NOTE: This is a paint performance issue, this is not a door manufacturing or door raw material fault.** Even though it may be inconvenient to make the decision not to paint, failure to conform to the paint manufacturers specifications, will likely result in a failure of the doors. This is not a door manufacturing or raw material fault, and will not be covered by the Superior Doors warranty.

Please consult your paint manufacturer with regards to strategies surrounding these environmental control issues. These may include such options as, other paint options, industrial heaters, industrial dehumidifiers and paint bucket heaters. Please be aware, that some forms of heating will create excessive amounts of atmospheric moisture while in use. These forms of heating should be avoided if possible or even more dehumidification may be required to offset this additional moisture.

**Failure to adhere to the above conditions can lead to a great range of problems.**

- If the doors are not sealed within 7 days, they could absorb moisture atmospherically.
- Using sand paper coarser than 240 grit on the faces of the doors could lead to non-premium paint finishes and raised scratches in the face of the doors.
- **Failing to conform to the paint manufacturer's application specifications as above, means that the paint system will not cure correctly.** If the paint cannot evaporate or cure as designed to, then the moisture will absorb into the doors. There is a strong probability that this will lead to some or all of the following problems.
  - **Raised MDF fibres/scratches on the faces of the doors.**
  - **Raised or visible finger joints.**
  - **Rail, stile and lock block expansion/show through.**
  - **Fluffy grooves.**

It is important to keep in mind that any non-conformance to either the paint manufacturer's instructions or Superior Doors Ltd warranty conditions, voids any warranty implied or given by Superior Doors. Any warranty claims where any of the above are not strictly adhered to, will be rejected by Superior Doors Ltd.

Please accept this information in the same spirit as offered. It is important that this note is passed to your builders with instructions for them to pass onto their painters.