TECHNICAL PAINT SERVICES

ADVICE FOR THE USE AND APPLICATION OF PAINTS AND COATINGS DURING PERIODS OF COOLER WEATHER.

Introduction:
If you are considering applying paint or other coatings during a period of cold or cooler temperatures, you should take all precautions to ensure your selected product does not fail. Failure will be caused by application at a temperature determined to be outside the optimum range (in this case "too cool") by the manufacturer as set out in the associated Technical Data Sheet. Very often, users of paint products are under pressures such as timescale or budget to be able to fully consider temperature for application and importantly, subsequent drying and curing of the product and the effects on performance and finish.

As Autumn turns to Winter, bringing with it fewer hours of daylight and the likelihood of increased precipitation and frost, several factors must be considered when applying paints and coatings.

Substrate temperature (of the surface to be painted):
During late Spring and in the Summer months, a good rule of thumb is to plan your painting so that you're always working in the shade, so that substrate temperatures don't get too hot. In cooler months however, application in direct sunlight is the best practice to adopt as this will help increase surface temperatures up into the "safe" range (15^{o}C +) even when air temperatures are cooler. In general, paints should be applied only when both *surface* and *air* temperatures are above 5^{o} – 10^{o}C and primers should only be applied when temperatures are above 10^{o}C in order that they dry properly.

In Winter, floors and metal surfaces will generally be several degrees colder than the air temperature and this should be factored in to timescales and budgets; where practical, the use of heating systems should be considered to raise temperatures in the subject environment.

Generally, the best window of opportunity for painting in the cooler conditions of Winter is between 10.00 am and 14.00 pm, but this can be considerably shorter in marginal conditions. When working on external surfaces at this time of the year, dew is another factor to consider, both in the mornings and later in the day.

The paint or coating:
As temperatures drop, so the viscosity (the property of a fluid that offers resistance to flow) of the coating will increase. This change in the paint will hinder the flow of the coating during application. Often, a small drop of thinners may help but it is recommended that before use, the paint is stored in a warm place (such as an airing cupboard or boiler room) or perhaps warmed very gently in warm water in a bath or bucket. If thinners are used, it should be noted that this action will reduce the solids content of the paint leading to a less durable and predictable coating. Water-borne

coatings must not be allowed to freeze during transportation or storage as they will be damaged and become unstable; the effects of the freezing process are irreversible and the paint must be disposed of without use.

It's also important that air temperatures don't drop below freezing the first night after paint has been applied, since curing paint can still contain moisture that will crystallize in sub-freezing temperatures, instead of evaporating out into the atmosphere as it's designed to do. If temperatures do drop, problems may very often not manifest themselves until the following Spring as moisture will remain “dormant” over the Winter, becoming apparent in the paint in the form of blisters once the Spring sun has warmed the surface of the paint.

Humidity:
Relative humidity is harder to measure than temperature, but it plays an equally important role in the curing of the paint or coating. The ideal is 50% relative humidity, but curing times are significantly affected when humidity levels exceed 70%. In high-humidity situations, surfactant leaching may become apparent - brown or white discoloration on the surface of the paint. This can generally be rinsed off or may be left to wash away with day-to-day weathering.

Low relative humidity can also be a problem, because the paint surface may dry too quickly and lead to blistering later on. However, this is less common in the cooler temperatures of mainland Britain during our Winters!

In summary, every Technical Paint Services product has an associated Technical Data Sheet; these can be found in several places on our website. Please look at this information for each product you are using and consider the environment in which you will be working, both internally and externally. Remember that during cooler weather, curing and drying are as important as application. Good planning and management will help enormously; very often it makes good sense to leave a project until warmer weather arrives. To be certain of the right choice of product as well as the correct use and application instructions, please email or call us on **01202 295 570** before placing an order.

The Paint Centre, 27 SOUTHCOTE ROAD BOURNEMOUTH BH1 3SH Tel 01202 295 570 Fax 01202 295 552
Email enquiries@technicalpaintservices.co.uk www.technicalpaintservices.co.uk
Technical Paint Services is the trading name of Neatcross Ltd. Registered Office as above. Company No: 1570359.