

DBNZ Tech Tip of The Week

New Zealand

experiences high levels of UV especially in summer due to its position in the Southern Hemisphere, Having a thinner ozone layer and cleaner air.

Peak summer UV values commonly exceed **11** (extreme) and can reach as high as **13** in the far North.

Note: *is common to see clearcoat fade and breakdown on bonnets, roofs and boot lids on e.g. Japanese imported cars painted for Northern Hemisphere UV conditions. These clearcoats either do not have enough UV blocker or have insufficient clearcoat film builds.*



For more information, please contact your local De Beer Technical Representative.

2K Solid Colour Topcoat Fade

NZ has one of the most intense levels of UV exposure from the sun anywhere in the world, typically **180 Kilo Langley's** per year (*the UV unit of measurement*) Most of the Northern Hemisphere typically experience **80 – 100** kilo Langley's.

As a result of the strength of this exposure, all 2K solid colour polyurethane topcoats exposed to the sun for long periods will be subject to pigment fade, particularly noticeable with Reds, Oranges, Yellows etc.



Sun Fade

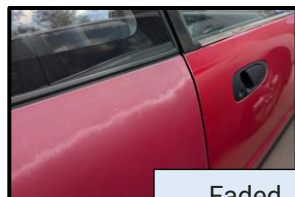
This is because the colour pigment itself has very little resistance to UV light, it will then oxidize and bleach out from the coating.

The colour can be temporarily restored by polishing the surface, this will restore the colour to an extent, but the act of buffing the paint will be detrimental, removing even more pigment from the surface reducing film builds, and the whole fading process will just begin again.

Solution

On high end solid 2K coatings where maximum colour holdout is desired it is highly recommended to apply a compatible quality 2K polyurethane clearcoat over the 2K colour. Quality 2K clears have within them UV blockers the UV blocker acts like a "sunscreen" within the clearcoat and prevents the harmful UV from reaching the colour pigments.

The same applies if blending a solid colour into a panel, the film build at the edge of the blend will be extremely thin, and it will only take a very short time for the edge of the blend to become visible due to UV exposure. Again, the recommendation would be to clear out the entire panel.



Faded blend edge.

Note: Be careful, there are many "2 cheap" 2K clearcoats on the market today, some of these may not have the desired amount of UV blocker within them??

Always select a quality brand of clearcoat compatible with the 2K colour being applied, one with a proven record in the NZ environment.