

RECOATING GALVANISED STEEL

The existing process:

To recoat galvanised substrates, you typically need a 50-70µm profiled surface. This is usually achieved chemically, manually or by natural aging. While etch-priming is promoted by the paint companies, blast profiling is more common-place.

After applying traditional coating primers, you need to remove the zinc salts after it has dried. You then apply the midcoat and topcoat. Typically, the coating will be at least 360µm though there are some regulations that specify a minimum 400µm.

Interestingly, this process involves 5 time-consuming, separate steps:

1 Surface prep / **2** Apply primer / **3** Remove the zinc salts / **4** Apply the midcoat / **5** Apply the topcoat

...which is arduous because once the surface is prepared you have a short window to apply the primer. Then you have a cleaning process, a short recoat interval, long dry times in-between coats, and if coating outdoors you will be impacted by the weather.

In the southern latitudes the process is also affected by cold temperatures, which further reduce the outdoor coating window, while rain and dew are perennial problems for applicators everywhere.

The MCU-Coating process:

Conversely, MCU Coatings Zinc and Miozinc primers can be applied up to 300µm in a single coat, require a minimal surface profile (+20µm) and are not affected by low-level flash rust, low temperatures and high humidity, and there is no need to remove any zinc salts.

MCU-Zinc/Miozinc does not have a maximum overcoat window.

Standard specification: MCU-Zinc/Miozinc at 170µm and MCU-Miotopcoat at 90µm DFT.

.... Which is a much simplified and more efficient 3-step process:

1 Surface prep / **2** Apply primer / **3** Apply the topcoat

No recoat intervals, minimal weather restrictions, can be applied all year round, touch dry within 10 minutes and unaffected by moisture within minutes – not days!

When required, the use of MCU-Quickcure can reduce the recoat interval down to 45 minutes.

Most importantly:

- the MCU-Coatings system will last 2-3 times longer; and
- improves application efficiencies up to 40%.

Independent Test Validations:

While we do not have access to the report, we do know that an independent test initiated and undertaken by the US Galvanizers Association confirmed that:

- a) Steel protected with 75µm to 100µm MCU-Miozinc has comparable performance to 125µm galvanisation when exposed to inland atmospheric exposure up to ISO Classification 12944-2 C3 Medium (Urban & Industrial atmospheres, moderate sulphur dioxide pollution. Coastal areas with low salinity); and
- b) A single coat of MCU-Miozinc at 100-125µm outperforms 125µm of galvanisation when the classification of the environment is equal or higher to ISO 12944-2 C4 High.

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It is also worth noting:

- a) Independent laboratory tests have shown that a single coat of MCU-Miozinc DFT 90µm shows negligible corrosion from the scribe line after 6,000 (ASTM B 117) Salt Spray testing hours.
- b) The life-time expectancy of galvanised substrates decreases rapidly when they are exposed to (atmospheric) chemical attack, whereas MCU-Miozinc has excellent chemical resistance.
- c) That galvanised coatings crack where the galvanization thickness varies and when it is too thick. Conversely, MCU-Miozinc passes the 12mm Conical Mandrell Bend test, without breaking the film, as it has 30% elongation.

Just one more reason to join the MCU revolution