

# **DRY FILM THICKNESS MEASUREMENT OF BELZONA® 1321, 1391 & 1392**

Ferro-magnetic fillers in Belzona® 1321 (Ceramic S-Metal), Belzona® 1391 (Ceramic HT) and Belzona® 1392 (Ceramic HT2) prevent accurate dry film thickness measurement with calibrated non-destructive ferrous (electromagnetic) gauges. These Electronic instruments, such as an Elcometer 345 gauge, use a magnetic field reading of the uncoated metal substrate to calculate the thickness of the coating by measuring the reduction of this magnetic field as the distance from the substrate increases. The ferro-magnetic fillers in Belzona® 1321, Belzona® 1391 and Belzona® 1392 will result in a stronger magnetic field and subsequently the Elcometer will read a thickness which is less than the physical thickness.

A relationship has been established between the Elcometer reading and the actual thickness of Belzona. This relationship is illustrated in the attached graph which can be used to correct the Elcometer reading. Since the levels of magnetic fillers are consistent throughout the material and between batches of material, reproducible and accurate dry film thickness measurements can be obtained by this method.

Following correct calibration of the gauge, using the shim of thickness closest to the expected thickness of the coating (note that the gauge should be recalibrated should the expected coating thickness significantly change), a reading should be taken of the coating thickness. Using the graphs attached, track horizontally at the level of the reading until the line is reached and read down for the actual thickness of the coating.

Please note that this information is given in an attempt to help check the thickness of cured Belzona® 1321, 1391 or 1392 and should only be used as a guide. If the exact actual thickness of cured Belzona® 1321, 1391 or 1392 is required other methods should be used.



# ELCOMETER 345 CORRECTION CHART FOR BELZONA® 1321 BELZONA® 1391 BELZONA® 1392

