

NEW SPARC TEST WORK IN LEADING COATINGS PRODUCTS DELIVERS EXCEPTIONAL RESULTS

HIGHLIGHTS

- **New test work using global leading commercially available coatings products enhanced with Sparc's graphene additives confirms exceptional 62% improvement in anti-corrosion performance**
- **Test work undertaken to ISO9227 (Neutral Salt Spray) over 1,344 hours on smooth Cold Rolled Steel provides standardised results for direct implementation**
- **Results confirm the significant commercial applicability for the world's leading coatings products used in industrial applications, marine environments and global shipping**

Sparc Technologies Limited (**ASX: SPN**) (**Sparc** or the **Company**) is delighted to advise that recent test work confirms that outstanding results continue for the company's proprietary graphene based additives for use in improving the performance of anti-corrosion coatings. Sparc's addressable coatings market is estimated to be US\$44bn by 2025 and these results complement the Company's engagements with major industry participants[^].

Sparc CEO, Mike Bartels, commented:

"Once again Sparc's proprietary graphene coatings technology demonstrates its superior ability to substantially improve the corrosion performance of commercially available coatings. These results will provide an enormous benefit to our continued discussions with the global coatings companies that are looking to commercialise our coatings technology."

Furthermore, Sparc is undertaking graphene test work on 12 separate coatings projects and the ongoing anti-corrosive work program will benefit our optimisation work in other coatings projects such as anti-fouling, anti-bacterial, anti-viral and drag resistance."

Sparc's recently completed test work programme utilised smooth cold rolled steel panels with 150 microns of Epoxy coating which were subjected to 1344 hours of salt spray, under controlled conditions and subject to stringent ISO9227^{^^} standards. This test work on non-standard substrate approximates the requirements of ISO12944-6 for High Durability (15 – 25 years) in aggressive C5 environments and was intended to amplify observable differences in corrosion performance between the various samples evaluated.

The coatings used are commercially available Epoxy coatings, from leading global coatings companies to which Sparc's proprietary graphene was added. The control panels had no graphene added to the paint, while the panels with graphene added exhibited up to 62% improvement in scribe creep^{*}, being the measure of corrosion resistance.

For one particular additive, this high level of improvement was seen consistently across a range of commercial coating types. This test work is also significant in that the substrate was smooth cold rolled steel, as opposed to the [previously announced](#) coatings test work on abrasive blast cleaned steel. This signifies a far more challenging environment for the coating system and highlights the enhancement provided by Sparc's Graphene based additives.

In the context of Sparc's targeted customer industries, these results represent a potential for substantial cost efficiencies and performance improvements.

Anti-corrosion test work continues with a full six month ISO12944 cyclic ageing test program underway and results to be announced as they come to hand later in the year.

Figure 1 below illustrates scribe corrosion creep performance. A lower value indicates less corrosion. Tests performed on paint brands that had a Sparc Graphene additive, showed up to 62% performance improvement in scribe corrosion creep (i.e. less corrosion), when compared to control paint brands that did not have a Sparc graphene additive.

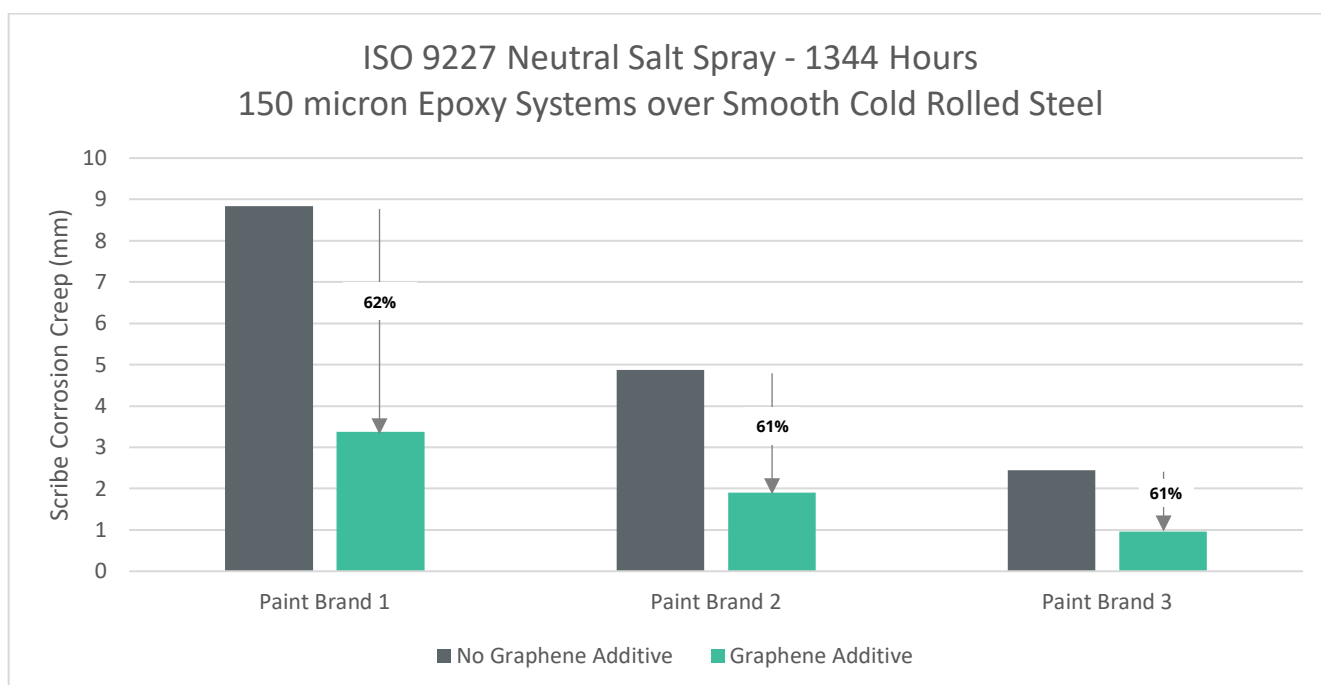


Figure 1: Test results showing anti-corrosion performance of coatings with a Sparc Graphene additive. Lower values demonstrate better performance

[^] See Sparc Presentation dated 22 March 2021

^{^^} ISO9227 2017 specifies the apparatus, the reagents and the procedure to be used in conducting the neutral salt spray (NSS), acetic acid salt spray (AASS) and copper-accelerated acetic acid salt spray (CASS) tests for assessment of the corrosion resistance of metallic materials, with or without permanent or temporary corrosion protection.

^{*} Scribe Creep describes the scribing of coated samples through the coating layer and into steel panels using a scribe tool and the resultant corrosion. The less corrosion creep on either side of the scribe, the higher the corrosion resistance performance.

-ENDS-

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About Sparc Technologies

Sparc Technologies Limited (ASX: SPN) is a South Australian based company that is focussing on the development of innovative technology solutions using the unique properties of graphene. Graphene, which can be extracted from graphite, is a 2-dimensional nano material made of carbon atoms arranged in a hexagonal pattern, giving it unique and powerful properties that, with the right technology, can be imparted on products to improve performance. Sparc Technologies has licenced graphene-based technologies from the University of Adelaide, a leading institution in the field of graphene research, and will focus on commercialising graphene-based technologies for large industrial markets for marine and protective coatings, environmental remediation and bio-medical applications.