

Genable® 3000 Series

✓ MACHINERY

✓ PROTECTIVE

✓ ACE

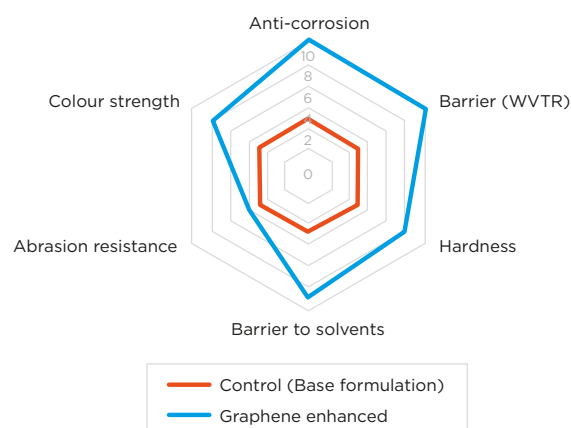
✓ INDUSTRIAL

✓ AUTOMOTIVE

Active, non-metallic, anti-corrosion additives with industry leading performance

- low addition levels
- C3 to C5 corrosion environment application
- provides cost savings in coat life, film thickness and system build optimisation
- formulation ready stable dispersions

Typical Properties of Genable® 3000 enhanced paints and coatings



Genable® 3000 series dispersions are supplied as standard in epoxy resins, but are also made available to customers in a range of customised formulations.

Genable® 3000 dispersions are also supported by application guidelines, extended performance datasets and considerable formulation know-how within AGM's Technical Group.

Genable® 3000 dispersions are based on patent pending technology.

The properties of the Genable® 3000 series make it an ideal tool-box additive for formulators seeking to significantly enhance coating performance in a range of environments. As an active additive capable of offering metal-free systems with extended durability, it is anticipated that it should find applicability in harsh C4 to C5 type environments such as in high humidity industrial and protective coating applications.

Once optimised into formulations Genable® 3000 series additives will provide attractive commercial benefits to coatings developers and end-users alike, enabling the further optimisation of multi-coat systems and providing significant reductions in application, maintenance and repair costs.

Standard Genable® 3000 series dispersions

Genable® 3000 series dispersions are available as standard in epoxy resins, but with a wider range of customised dispersions under near-term development for individual customers.

Genable® dispersions have been prepared to a set viscosity and particle size via a controlled manufacturing process.

MATRIX	TYPE
Genable 3000	Stabilised dispersion of graphene in Epoxy EEW (190g/eq.) Resin
Genable 3001	Stabilised dispersion of graphene in Epoxy EEW (250g/eq.) Resin

- Typical addition levels of 5-10% depending on application
- Typical storage life 3-6 months at ambient temperature
- Set of Technical Application Notes to support formulators

Customised dispersions

Our customised dispersions are developed to meet customer-specific processing, performance and application needs. Example systems include:

- PolyesterPolyol
- Saturated Polyester
- Alkyd (Short, Medium, Long Oil)
- Acrylic Polyol
- Ethyl Silicate
- Epoxy

FOR MORE INFORMATION

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EXAMPLE

Genable® 3000 DEMONSTRATES OUTSTANDING PERFORMANCE IN A TYPICAL INDUSTRIAL EPOXY PRIMER SYSTEM

Incorporated into the formulation of an industry standard C3 type epoxy primer system, and tested under representative cyclical salt spray testing (ASTM G-85-94 Prohesion), Genable® 3000 series materials have been shown to deliver over **five times extension to the primer coating lifetime** when compared to a typical zinc phosphate based control.

This extended durability targets applications in C4-C5 environments such as, industrial areas subject to high humidity and aggressive atmosphere, including inshore areas of medium to high salinity. Significantly, Genable® 3000 dispersions provide a tool-box additive for formulators looking to significantly enhance coating performance **without the use of metal additives**.



*Control is an in-house primer typical of a standard industrial C3 zinc phosphate based system

Substrate: SA 2.5 Sandblasted Steel
Coat thickness : 60 microns
Mechanical: No adverse performance and good adhesion to substrate and PU top coat

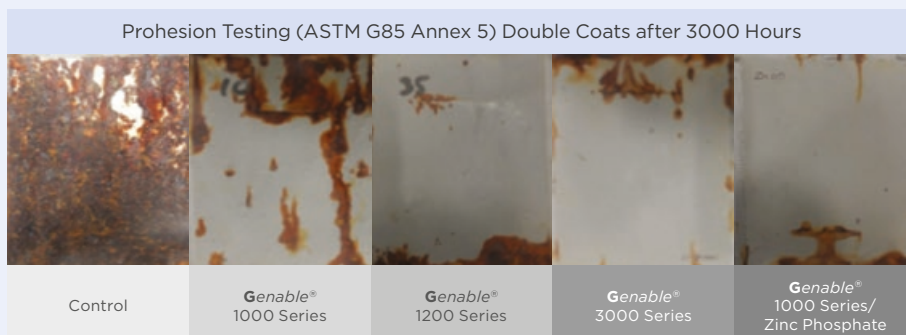
EXAMPLE

Genable® 3000 TECHNOLOGY POTENTIAL IN HIGH-BUILD PRIMERS FOR C4/5 ENVIRONMENTS

AGM is further investigating the Genable® 3000 series for applications in harsher C4/C5 environments and has embarked on an extensive test programme looking at the performance of a higher-build primer system (ISO12944).

The thickness of this high-build primer is around 110 microns and is therefore typically thinner than some comparative industry standard systems in the C4/C5 category. Extended durability, thinner and flexible coatings are directly equatable to significant cost savings in both initial coating system application, as well as maintenance and repair for commercial end users.

High-build primers are now undergoing further testing under continuous salt spray conditions (ISO9227).



EXAMPLE

Awards recognition of breakthrough Genable® 3000 anti-corrosion graphene technology

The momentum that AGM's proprietary Genable® 3000 graphene technology has achieved has helped drive industry wide recognition of AGM's expertise as an innovation leader in the coatings industry. Reflecting this, the Company has secured a nomination as a finalist in the *Materials Performance Corrosion Innovation Awards 2019*.

The *MP Corrosion Innovation Awards* program acknowledges the leaders advancing understanding and development of global corrosion technology. It is run in parallel with NACE International. Winners will be announced at the CORROSION conference 2019 in Nashville, Tennessee, USA.

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