

Genable[®] 3000



Innovative Genable[®] platform technology for the incorporation of graphene into your formulation.

PRODUCT DESCRIPTION

A formulation-ready Genable[®] epoxy resin, Genable[®] 3000 dispersion has been developed to enhance the anti-corrosion performance of coatings on steel substrates by the use of a patented active, non-metallic anti-corrosion additive.

Genable[®] 3000 dispersion consists of graphene nanoplatelets stabilised in epoxy resin (EEW = 190g/eq.). The graphene nanoplatelets are a synthesised form of graphene produced by a patented process.

PRODUCT INFORMATION (Preliminary)

Appearance	Black liquid
Matrix	Epoxy resin (EEW = 190g/eq.)
Graphene Content (wt/wt%)	5
Density (g/ml)	1.20 – 1.22
Viscosity (Pa.s)	20 – 25
Particle Size (D10)	1 – 3 microns
Particle Size (D50)	5 – 15 microns
Particle Size (D90)	20 – 40 microns
Shelf Life	3 months

USAGE

Graphene nanoplatelets produced using AGM's processes are "dispersion-ready", which means that the platelets can be incorporated into formulations using standard dispersion equipment.

DIRECTIONS

Dispersion may show slight sedimentation during transportation or on storage. If a small amount has occurred during transportation or storage then the dispersion can be recombined by simple mechanical mixing thoroughly with a spatula, palette knife or mechanical stirrer before use.

STORAGE

Product should be stored at room temperature, in the original containers and kept tightly closed. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container sealed until ready for use.

SAFETY

Wear appropriate PPE. Use the minimum quantity of product required for a particular process. Use only in well-ventilated areas, preferably in an enclosed system. Provide appropriate exhaust ventilation at places where aerosols/dust may be formed. Handle and open container with care. Keep in the original container or an approved alternative made from a compatible material. Always close containers tightly after removal of the product. Empty containers retain product residue and can be hazardous. Do not re-use container. Dispose of materials in accordance with local regulations.

STARTING POINT FORMULATION GUIDE

	Base Paint	Base Paint plus Non-Metallic Anti-Corrosion Additive
	Wt/Wt %	Wt/Wt %
Epoxy (EEW = 190g/eq.)	21.34	11.34
Bentonite thixotropic	0.37	0.37
Aromatic solvent	2.02	2.02
Adhesion resin	0.25	0.25
Dispersant	0.41	0.41
Aliphatic solvent	15.68	15.68
White pigment	11.18	11.18
Filler	44.47	43.47
Epoxy (EEW = 190g/eq.)	4.27	4.27
Genable® 3000	0	11
Total	100	100
pvc	37	37

Incorporating graphene into an epoxy based paint system: The preferred stage to introduce the dispersion ready **Genable® 3000** into the manufacture of the paint is during the let-down stage phase. This can be achieved by use of typical dispersion equipment used for the let-down stage.

You will follow any instructions and all applicable guidelines, laws, regulations, government agency guidelines and best industry practice regarding the use, transport, security, and disposal of the products. All statements and technical information contained in this data sheet are given in good faith and are based on information believed to be reliable, but their accuracy and completeness are not guaranteed and no representation or warranty (express or implied) is given. Any statements and technical information do not constitute an offer to any person and do not form the basis of any contract. All products are sold subject to Applied Graphene Materials' standard terms and conditions of sale. The user will determine the suitability of the products for their intended use prior to purchase and will assume all risk and liability (to the fullest extent permitted under applicable law) in connection with that purchase and intended use. It is the responsibility of those wishing to sell items made from or using the products to inform other users of the properties of the products and the purposes for which they may be suitable, together with all precautionary measures required in handling those products. The information in this datasheet is under constant review and subject to ongoing modification, however, Applied Graphene Materials shall be under no obligation to notify the user of any modifications made.