

Wireguard G50 SA

Coating Powder

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General description

Wireguard G50 SA is a powder based on a blend of polyolefins and is supplied for the fluidised bed coating of wire articles (for continuous mesh please see Wireguard G50 CM). Wireguard G50 SA is ideal for coating items which will be exposed to sunlight, humidity and airborne pollutants for prolonged periods of time. The coating has an attractive gloss finish. The low melt viscosity of the material allows minimal application temperatures and thus saves on energy.

Typical uses

For fencing panels and posts, air conditioning grills and other wire items. For continuous mesh please contact Plascoat.

Typical properties of the powder

Coverage (100% efficiency)	3.1 m ² /kg at 350 microns
Particle Size	Below 315 microns
Bulk Density (at rest)	Min. 0.30 g/cm ³
Fluidising Characteristics	Excellent
Packaging	20 kg sacks

Handling and storage

Stored in a clean dry area at 10-25°C and out of sunlight, the material should not deteriorate. However, in the interest of good housekeeping, old stocks should be used first.

Common to all coating powders, there may be the likelihood of agglomerate formation during transportation and storage. The coating powder can be sieved to break up the agglomerates and therefore return the powder to its original condition; this does not affect the quality of the powder. The accumulation of powder particles is a physical phenomenon and may occur as a result of compaction or when cold powder, below 10°C, is brought into direct contact with warm humid air. In this latter situation the powder, still sealed, should be given time to warm up to the ambient temperature before use.

Health and safety

Plascoat Wireguard G50 SA is supplied as a finely divided powder. While there are no known health hazards associated with Wireguard G50 SA, normal handling precautions for dealing with fine organic powders should be taken - i.e. excessive dust generation and inhaling of the powder should be avoided. Facilities may be required for removing excess dust from the working area during the coating of certain difficult items.

As with all polymeric powders, the material can ignite if brought into contact with a high temperature source or ignition - particularly in the fluidised condition.

Reference should be made to the respective Plascoat GHS Safety Data Sheet, available on request.

Guide to typical coating conditions

Pre-treatment:

Ensure metal is clean and free of rust or mill scale. This can be achieved by degreasing or pickling but where necessary shot-blasting is recommended. Plascoat Wireguard G50 SA can be coated over suitable chemical pre-treatments such as zinc phosphate conversion coatings.

Application

It is recommended that items should be pre-heated to metal temperatures between 250 and 380°C. Recommended dip time is 3 to 5 seconds.

Post-heating may be necessary in order to obtain a smooth surface finish on thin wire. Post-heat temperatures should not exceed 250°C.

These conditions are given as a guide only and conditions should be optimized for the particular plant on which the items are being coated.

Process temperatures should be kept to the minimum necessary to achieve a smooth surface finish. Overheating can cause the coating to discolour later in storage or in service.

Note that thicknesses outside the recommended range may be detrimental to the properties of the coating.

Typical properties of the material

Specific Gravity		0.94 g/cm ³
Tensile stress at Yield	ISO 527	10.9 MPa
Elongation at Break	ISO 527	50%
Hardness	Shore A	95
	Shore D	52
Environmental Stress Cracking	ASTM D1693	Over 1000 hrs

Guide properties of the coating

Recommended Coating Thickness	300 to 700 microns	
Appearance	Smooth, Glossy, (60 at 60° for green 475) but will vary depending on colour	
Colour(s)	<p>Plascoat Wireguard G50 SA has been matched to RAL 6005 (Plascoat Green 475) and this is expected to be the main colour as the main market it is intended for is fencing in which this colour is predominant.</p> <p>However, Wireguard G50 SA can be matched and supplied to most colours subject to minimum order quantities.</p>	
Impact Strength	Gardner (drop weight), Direct 23°C ISO 6272	1.6 Joules
Abrasion	ASTM D4060/84, Taber, H18 Wheels, 500g Load, 1000 cycles	30 mg Weight Loss
	ASTM D4060/84, Taber, CS17 Wheels, 500g Load, 1000 cycles	20 mg Weight Loss
	Sand Abrasion at 5 bar for 30 seconds	20 µm Loss in Coating Thickness



Weathering	QUV-A, (340 nm), 2000 Light Hours	No Cracking or Crizzling
	Salt Spray, ISO 9227 & NF 41-002, 1000 hours	No Blistering or Corrosion
	Humidity, DIN 50017, 40° at RH 100%, 240 hours	No Blistering or Corrosion
Chemical Resistance	- Dilute Acids 23°C	Fair
	- Dilute Alkali 23°C	Fair
	- Salts (except peroxides) 23°C	Fair
	- Solvents 23°C	Poor
Safe Working Temperature	Minimum	-50°C
	Maximum	60°C

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