

Plascoat PPA 524 ES

General description

This material has been specifically designed to provide textured finish coatings for applications where exterior durability is required. It is applied by the electrostatic spray process. Plascoat PPA 524ES is based on PPA 571ES technology and will provide many of the benefits of that material though some properties will differ due to the formation of a textured film.

PPA 524ES has a high coefficient of friction in both dry and wet conditions.

Typical uses

Applications where a textured finish is desirable for cosmetic or grip reasons.

Typical properties of the powder

Coverage (100% efficiency)	5.2m ² /kg at 200 microns
Particle Size	95% less than 200 microns
Bulk Density (at rest)*	0.40 g/cm ³
Fluidising Characteristics	N/A
Packaging	20 kg cardboard boxes

*These values may vary from colour to colour

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 PPA 524 ES is supplied as a finely divided powder. While there are no known health hazards associated with PPA 524 ES, 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.

Should the coating be required for contact with food or potable water, further details should be obtained from Plascoat.

Guide to typical coating conditions

Recommended Pretreatment

For mild steel, ensure metal is clean by thorough degreasing and removal of mill scale.

To get the full benefits of the material, mild steel should be blast cleaned to Swedish standard SA 2½-3. Alternatively degreasing and iron phosphating can be used.

For galvanized steel the surface should be grit blasted with a fine non-ferrous medium at a low pressure. For maximum long term adhesion, a suitable phosphate or chromate system should be used.

Electrostatic spray method:

Set amps to 5 – 15 microAmps and voltage to 100kV if both settings are available. For Corona guns with voltage setting only, set voltage at 30-50 kV. Failure to use the correct settings may result in coatings that are too thin or with poor coverage.

The heating schedule should be 190°C to 220°C for 5 to 40 mins. depending on metal thickness. To ensure optimum adhesion the metal temperature during processing must exceed 150°C. Since these materials are thermoplastic there is no cross-linking to take place.

Overheating can cause craters to form in the coating, or the coating to discolour in storage or in service. Thicknesses outside the recommended range may be detrimental to the properties of the coating.

Do not cure thermosetting paints with these materials. The fumes from such systems can affect the surface of ES Texture coatings.

Typical properties of the material

Specific Gravity*		0.95 g/cm ³
Hardness	Shore A	95
	Shore D	50
Vicat Softening Point	ISO 306	70-80°C
Melting Point		105-155°C

*These values may vary from colour to colour

Typical properties of the coating

The following data applies to a 200 micron coating applied under standard conditions onto 3mm thick steel. The pretreatment consisted of degreasing and gritblasting unless otherwise stated.

Recommended Coating Thickness		150-250 microns
Appearance		Textured
Gloss	ISO 2813	60
Impact Strength	Gardner (drop weight) ISO 6272	
	Direct 23°C	1.5 Joules
	Indirect 0°C	4.0 Joules
Abrasion	Taber ASTM D4060/84	
	H18, 500g load, 1000 cycles	60 mg weight loss
Coefficient of Friction	ASTM D4518 3" x 3", 820gm, Shore A rubber faced sled, 150mm/min	
	Dry	0.8
	Wet	0.8
Rz Value	Surtronic 3P surface analyser	40 µm
Salt Spray	ISO 9227 and NF 41-002	Results after 1000 hours
	Steel - grit blasted	Loss of adhesion less than 7mm from scribe. Under film corrosion less than 2mm
	Galvanised steel - Grit blasted	No loss of adhesion when unscribed
	- Phosphated and Chromated	Loss of adhesion less than 5mm from scribe. Max 1 mm loss of adhesion from scribe
Chemical Resistance*	- Dilute Acids 60°C	Good
	- Dilute Alkali 60°C	Fair
	- Salts (except peroxides) 60°C	Good
	- Solvents 23°C	Poor

Adhesion	PSL, TM 19	A-1
Weathering	QUV ASTM G53-77 Florida 45° facing South	Results after 500 hours - No significant change in color or loss of gloss.
Safe Working Temperature	(Continuous in air)	60°C max

*The results given are for full immersion in the chemicals for a prolonged period of time. The coating is resistant to splashes and short term contact of most chemicals. Further technical advice may be obtained from Plascoat concerning the effects of particular chemicals or mixtures.

Quality

Plascoat is committed to the manufacture and supply of a wide range of thermoplastic coating powders. This service is backed by the unrivalled experience of over 60 years of powder coating application. With a policy of continuous improvement to its range of products, Plascoat reserves the right to alter or amend any item. Stringent quality control procedures are carried out at every relevant stage of manufacture and Plascoat operates a quality management system approved by BSI in accordance with ISO 9001:2008.

Plascoat is an Axalta Coating Systems company. Plascoat is an EU registered trade name.

Disclaimer

The information given here is, to the best of our knowledge, true and accurate.

Product and item design, pre-treatment, coating conditions, quality assurance and conditions of product end use are among the factors that affect performance of the coated products and are outside Plascoat control.

Conditions under which our materials may be used are beyond our control. The suitability for application and performance of finished goods coated with Plascoat material is the sole responsibility of the customer and end user.

Plascoat expressly denies specific or implied warranties including warranties for fitness for a particular use or purpose.

Contact Plascoat

Plascoat Systems Ltd
 Farnham Trading Estate, Farnham,
 Surrey, GU9 9NY United Kingdom
 T: +44 (0) 1252 733777
 F: +44 (0) 1252 721250
 E: sales@plascoat.com

Plascoat Europe BV
 PO Box 9, 3214ZG, Zuidland,
 The Netherlands
 T: +31 (0) 181 458 888
 F: +31 (0) 181 458 877
 E: salespce@plascoat.nl

Plascoat Corp.
 2700 Avenger Drive, Suite 108,
 Virginia Beach, VA 23452
 United States of America
 T: (844) 752-7262
 E: usservice@plascoat.com

