

Plascoat LDPE

Polyethylene Coating Powder

General description

Plascoat LDPE is a polyethylene powder supplied for fluidised bed coating of metal articles. The resulting coatings have a smooth and attractive finish with good edge protection and excellent covering power.

LDPE is ideal as a general coating material and is particularly suitable for domestic wirework applications.

Typical uses

Coating all kinds of wirework:
Refrigerator shelves and baskets, racks, shelving, display stands, etc.

Typical properties of the powder

Coverage (100% efficiency)	3.1 m ² /Kg at 350 microns
Particle Size	95% less than 5% 300 microns
Bulk Density (at rest)	0.36 g/cm ³
Fluidising Characteristics	Excellent
Packaging	20 Kg sacks

Handling and storage

Stored in a clean dry area at 10-30°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 LDPE is supplied as a finely divided powder. While there are no known health hazards associated with LDPE, 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

Recommended Pretreatment:

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

Batch Operation:

Metal preheat temperature 300°C - 400°C, depending on metal thickness. Dip for 3-5 seconds. A postheat cycle at 200°C may be required to develop fully the surface finish on thin items.

Automatic Coating Plant:

Pre-heat oven	360 - 400°C for 2 to 4 minutes
Dip	3 - 5 secs
Post-heat oven	200 - 220°C for 2 to 4 minutes
Water Quench	Optional

The process temperatures used should only be the minimum to achieve an acceptable surface finish. Overheating may cause the coating to discolour later in storage or in service.

Thicknesses outside the recommended range may be detrimental to the properties of the coating.

Typical properties of the material

Specific Gravity*		0.92 g/cm ³
Tensile Strength	ISO 527	10 MPa
Elongation at Break	ISO 527	250%
Brittleness Temperature	ASTM D-746	-20°C
Hardness	Shore A	95
	Shore D	41
Vicat Softening Point	ISO 306	84°C
Melting Point		107 °C
Environmental Stress Cracking	ASTM D1693	Greater than 100 hrs
Flammability	UL94 3.2mm moulding	Unrated (See also Properties of Coating)
Dielectric Strength	IEC 243 VDE 0303	25 KV/mm at 350 microns

*These values may vary from colour to colour

Typical properties of the coating

The following data applies to a 350 micron coating applied under standard conditions onto 3mm thick steel. The pretreatment consisted of degreasing and gritblasting.

Recommended Coating Thickness		300-1200 microns on flat plate 800-1200 microns on wire
Appearance		Smooth/Glossy
Gloss	ISO 2813	55
Impact Strength	Gardner (drop weight) ISO 6272 Direct 23°C	2.0 Joules
Abrasion	Taber ASTM D4060/84 H18, 500g load, 1000 cycles CS17, 500g load, 1000 cycles	80 mg weight loss 35 mg weight loss
Chemical Resistance*	- Dilute Acids 60°C - Dilute Alkali 60°C - Salts (except peroxides) 60°C - Solvents 23°C	Fair Fair Fair Poor
Safe Working Temperature	(Continuous in air)	60°C max

*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

