

# Plascoat PPA 691

## Coating Powder

### GENERAL DESCRIPTION

Plascoat PPA 691 is a self adhesive powder based on a blend of polyolefins and is supplied for the fluidised bed coating of battery boxes. It provides good resistance to acids and can be over-sprayed with epoxy paints if required. This coating meets the hardness, electrical and chemical resistance requirements of ATEX.

### TYPICAL USES

Battery boxes

### GUIDE TO TYPICAL COATING CONDITIONS

#### *Recommended Pretreatment:*

Ensure metal is clean by thorough degreasing and removal of rust and mill scale. This is usually achieved by grit blasting.

#### *Batch Operation:*

Metal pre-heat temperature: 240°C - 280°C depending on metal thickness.

Preheat time is usually 15-30 minutes. The battery boxes are dipped and rotated in the fluidising tank to fill and empty them in the minimum time possible. This should achieve an outside coating of 500-800 microns and an internal lining of 800 to 1200 micron.

The process temperature used should 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.

*For typical properties of the coating see overleaf.*

### TYPICAL PROPERTIES OF THE POWDER

Coverage (100% efficiency)	3.1m <sup>2</sup> /Kg at 350 microns 1.1m <sup>2</sup> /Kg at 1000 micron
Particle Size	below 350 microns
Bulk Density - at rest	0.35 g/cm <sup>3</sup>
Fluidising Characteristics	Excellent
Packaging	20 kg sacks

### TYPICAL PROPERTIES OF THE MATERIAL

Specific Gravity*		0.94 g/cm <sup>3</sup>
Tensile Strength	ISO 527	12 MPa
Elongation at Break	ISO 527	100%
Brittleness Temperature	ASTM D-746	-70°C
Hardness	Shore A	98
	Shore D	56
Vicat Softening Point	ISO 306	90°C
Melting Point		105-125 °C
Environmental Stress Cracking	ASTM D1693	Greater than 1000 hrs
Toxicity Index**	NES 7	1.8
Flammability**	UL94 3 mm moulding	Unrated (see also Properties of Coating)
Dielectric Strength**	IEC 60243	46 KV/mm at 380 microns
		greater than 340°C
Autoignition Temperature**		17.8 kV at 380 microns
Breakdown Voltage**	IEC 60243	
Comparative tracking index	IEC 60112	> 650 Volts
		Surface Resistivity**
Water Absorption**	ASTM D570-81	<0.03%

\* These values may vary from colour to colour

\*\* These figures are based on test results obtained with similar materials

### STORAGE

Stored in a clean, dry area at ambient temperature the material will not deteriorate. However, in the interest of good housekeeping, stocks should be rotated.

### HEALTH AND SAFETY

Plascoat PPA 691 is supplied as a finely divided powder. Whilst there are no known health hazards associated with PPA 691, 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 Health and Safety Data Sheet, available on request.

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## Coating Powder

### TYPICAL PROPERTIES OF THE COATING

The following data applies to a 600 micron coating applied under standard conditions, onto 3mm thick steel. The pretreatment consisted of degreasing and shotblasting.

Recommended Coating Thickness		600 -1200 microns
Appearance		Smooth, low gloss
Gloss	ISO 2813	50
Impact Strength	Gardner (drop weight) ISO 6272 Direct 23°C	2.5 Joules
Abrasion	Taber ASTM D4060/84 H18, 500g load, 1000 cycles CS17, 500g load, 1000 cycles	80 mg weight loss 35 mg weight loss
Weathering	QUV, 2000 hrs Salt spray ASTM B117 1000 hrs	No cracking or crazing No blistering or corrosion
Chemical Resistance (at 23°C)	- Dilute Acids 60°C - Dilute Alkali 60°C - Salts (except peroxides) - Solvents 23°C	Good Fair Fair Not recommended
Burning Characteristics Ignitability*	BS476: Pt5: 1979 500 micron coating	P - not easily ignitable
Surface spread of flame*	BS476: Pt7: 1979 500 micron coating	Class 2
Fire Propagation*	BS476: Pt6: 1989 500 micron coating	I = 0.2
Flammability*	UL94	V <sub>0</sub> (see also Properties of Material)
Safe Working Temperature		70°C max. continuous

\*\* These figures are based on test results obtained with similar materials

### 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 50 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 can also offer, through its factories in Europe, specialist plastic coating equipment, an extensive custom coating service and a size reduction service for plastics and other materials.*

*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's 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.

**Plascoat Systems Limited**  
Farnham Trading Estate,  
Farnham, Surrey,  
GU9 9NY  
United Kingdom  
Tel: +44(0)1252 733777  
Fax: +44(0)1252 721250  
Web site: www.plascoat.com  
sales@plascoat.com

**Plascoat Europe BV**  
PO Box 9  
3214ZG  
Zuidland  
The Netherlands  
Tel:+31 (0) 181 458 888  
Fax:+31 (0) 181 458 877  
salespce@plascoat.nl

**Plascoat Corp.**  
2700 Avenger Drive  
Suite 108  
Virginia Beach  
VA 23452  
USA  
Tel: (844)-PLASCOAT  
(844-752-7262)  
usservice@plascoat.com