

Talisman 30

Performance Polymer Alloy Coating

11/2018

General description

Plascoat Talisman 30 has been developed to provide a long lasting, hard, tough coating for mild steel. It is based on an alloy of polyolefins. Therefore, it is halogen free and the combustion fumes are low in smoke and have a low toxicity index.

The coating is the hardest in our range. As such it has excellent scuff and abrasion resistance. The coating has excellent adhesion to metal without the need of a separate primer. The coating has FDA food contact approval.

Note: Not all Talisman 30 colours are specifically UV stabilised. Please contact Plascoat for further details. Alternatively, please consider the use of PPA 571.

Typical uses

Food shelving and metal furniture.

Typical properties of the powder

Coverage (100% efficiency)	3.3 m ² /kg at 300 microns
Particle Size	95% less than 250 microns
Bulk Density (at rest)	0.40 g/cm ³
Fluidising Characteristics	Excellent
Packaging	20 kg paper 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 Talisman 30 is supplied as a finely divided powder. While there are no known health hazards associated with Talisman 30, 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 Pre-treatment:

For mild steel, ensure metal is clean by thorough degreasing and removal of mill scale. To get the full benefits of the material, the metal can also be blast cleaned to Swedish standard SA 2½-3 or phosphated.
(Note that Talisman 30 does adhere to some passivating systems used to protect galvanized metal)

Batch Operation:

Metal preheat temperature 250°C - 380°C, depending on metal thickness. Dip for 3 - 10 seconds. A post-heat cycle at 170°C may be required to develop fully the surface finish on thin wires.

Water quenching is not necessary except for handling purposes. If present, water quenching should take place at least 30 seconds after all parts have flowed out to a smooth coating and at least 90 seconds after dipping in the powder.

Typical properties of the material

Specific Gravity		0.99 g/cm ³
Tensile Strength	ISO 527 (100 mm/min)	16 MPa
Elongation at Break	ISO 527 (100 mm/min)	160%
Hardness	Shore A	98
	Shore D	58
Pencil Hardness		H/B
Vicat Softening Point	ISO 306	103°C
Melting Point		155 °C
Environmental Stress Cracking	ASTM D1693	Greater than 1000 hrs
Dielectric Strength	ASTM D149	49.6 kV/mm at 400 microns

Typical properties of the coating

The following data applies to a 350 microns coating applied under standard conditions onto 3mm thick steel or aluminium. The pre-treatment consisted of degreasing and grit-blasting unless otherwise stated.

Recommended Coating Thickness		200-600 microns
Appearance		Smooth/Glossy
Gloss	ISO 2813	60
Abrasion	Taber ASTM D4060/84	
	H18, 500g load, 1000 cycles	69 mg weight loss
	CS17, 500g load, 1000 cycles	20 mg weight loss
Salt Spray	ISO 9227 and NF 41-002 Steel - Scribed	Loss of adhesion less than 15 mm from scribe after 500 hrs
	- Unscribed	No loss of adhesion
Chemical Resistance*	- Dilute Acids 70°C	Good
	- Dilute Alkali 70°C	Good
	- Salts (except peroxides) 70°C	Good
	- Solvents 23°C	Poor
Adhesion	PSL, TM 19	A-1
Safe Working Temperature	(In air)	100°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.



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