

**Engineering Specification TES-007**

Engineering Specification Name:

**Powder Coating**

Issued By:

**Engineering**Rev: **R000**Eff. Date: **2/2/18**

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- 1.0 Purpose:** The purpose of this engineering standard is to define the approved method for finishing components with powder coating that will ensure durable protection of parts and an attractive appearance.
- 2.0 Scope:** This engineering standard outlines all approved methods for finishing components with powder coating. Test Devices documentation, including drawings, will reference this specification and specify the color to be used.
- 3.0 Definitions:**
- Powder coating: a free flowing, dry powder that is applied electrostatically and is then cured under heat to allow it to flow and form a skin.
- 4.0 Responsibility:** It is the responsibility of Test Devices' Engineering Manager to ensure this standard is maintained and updated continuously.
- 5.0 Engineering Standard:** The sections below define the acceptable powder coating method approved by Test Devices' Engineering department. Any alternate method must be requested and approved by Test Devices' Engineering department before the alternate coating method is applied.

**APPROVALS**

Engineering	Hiro Endo, Engineering Manager	
Quality	Enzo Alami, Quality Manager	

**Revision Log**

Revision	Summary of Changes	Approved By Process Owner(s)	Approved By VP Quality / Mgt Rep	Rev. Release Date
R000	Initial release.			2/2/18

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## **6.0 Powder Coating Method**

### **6.1 Masking**

- 6.1.1 Unless otherwise specified, all blind, through and threaded holes are to be plugged or masked.
- 6.1.2 Additional surfaces to be masked, if any, are to be specified on the applicable detail or assembly drawing.

### **6.2 Surface Preparation**

- 6.2.1 All surfaces are to be sand or shot blasted to clean metal scale, rust, weld slag, etc. if present.
- 6.2.2 All surfaces must be cleaned to remove dirt, grease, etc.
- 6.2.3 If appropriate, surfaces are to be blasted to create a more adhesive surface for the powder coating.
- 6.2.4 As an alternative to sand and/or shot blasting, surfaces may be prepared with an iron phosphate etch in conjunction with steam cleaning.

### **6.3 Powder Coating**

- 6.3.1 Material: polyester, rated for exterior exposure.
- 6.3.2 Gloss: semi-gloss (60%).

### **6.4 Cure**

- 6.4.1 Cure per the powder coating manufacturer's instructions to insure proper adhesion and color.

### **6.5 Appearance**

- 6.5.1 Pin holes are not acceptable.
- 6.5.2 Color, gloss and texture must be consistent across a single part, and from part to part when there are multiple parts in the same purchase order.

## **7.0 Color**

**7.1 Standard Color:** Unless otherwise specified, the standard Test Devices powder coating color is RAL 5010 Gentian Blue.

**7.2 Black:** Unless otherwise specified, when black powder coating is specified on the applicable detail or assembly drawing, the color is RAL 9017 Traffic Black.