



OXYPLAST

P O W D E R C O A T I N G S

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- TROUBLE-SHOOTING -
- Film Defects and Solutions

Problem	Possible cause	Possible solution
1. Poor impact resistance.	a. Under cure.	<ul style="list-style-type: none"> ● Increase oven temperature.
Poor adhesion.	b. Poor cleaning or pre-treatment.	<ul style="list-style-type: none"> ● Increase dwell time in oven. ● Check pre-treatment chemicals & equipment.
Poor flexibility.	c. Film thickness too high.	<ul style="list-style-type: none"> ● Reduce film thickness - adjusting application equipment.
Poor corrosion resistance.	d. Change in substrate.	<ul style="list-style-type: none"> ● Check with substrate supplier.

Problem

Possible cause

Possible solution

2. Poor chemical resistance.

a. Under cure.

- **Increase oven temperature.**

Poor pencil hardness.

- **Increase dwell time in oven.**

Poor abrasion resistance.

Problem

Possible cause

Possible solution

3. **Orange peel.**

a. **Film thickness too thin.**

● **Increase film thickness - adjusting application equipment.**

Poor edge coverage.

b. **Heat up rate too slow.**

● **Increase oven temperature.**

Problem

Possible cause

Possible solution

4. **Gloss too low for high gloss powder.**

Pin-holes – gassing through coating surface.

a. **Incompatible powder contamination.**

b. **Micro-pin holing from degassing.**

- **Clean application equipment before changing powder.**
- **Check powder compatibility of virgin and re-claim powder.**
- **Check substrate for porosity & moisture.**
- **Check film thickness too thick.**
- **Check air supply for moisture.**

Problem

Possible cause

Possible solution

4. **Inconsistent film thickness.**

a. **Improper gun positioning.**

● **Check and reposition guns.**

b. **Reciprocator not matched to line speed.**

● **Adjust line speed or reciprocator.**

Inconsistent metallic Finishes.

c. **Defective spraying equipment.**

● **Check spraying equipment.**

● **Clean the deflector of the spray gun.**

Problem

Possible cause

Possible solution

5. Craters.

a. Contamination of silicon or oils.

- **Check air supply for oil and moisture.**
- **Check surrounding for oil or silicon contamination .**

b. Poor pre-treatment – remaining grease or oil .

- **Check pre-treatment chemicals & equipment.**

c. Contamination with materials that is incompatible.

- **Check for presence of incompatible materials – clean up installation if necessary.**

Problem

Possible cause

Possible solution

6. **Pitches & other contamination.**

a. **Dust or other contaminants on surface of substrate.**

● **Check substrate and pre-treatment of substrate.**

b. **Poor pre-treatment – remaining metal debris.**

● **Check pre-treatment chemicals.**

c. **Contamination with materials.**

● **Check spray-booth, oven and surrounding for contaminants.**

Problem

Possible cause

Possible solution

7. Sagging.

a. Film thickness too thick.

● **Reduce film thickness.**

b. Powder flow is too good.

● **Reduce oven temperature with increased dwell time.**