

# ZP-4D

## Dry Powder Developer

ZP-4D is a noncombustible, dry powder, Form a developer that is ideal for highly sensitive fluorescent penetrant processes. ZP-4D is applied to oven dried parts following the use of penetrants and forms a thin film on parts that enhances the visibility of ultra-fine discontinuities.

ZP-4D is listed on the QPL SAE AMS 2644 Qualified Product List and is approved for use by Pratt & Whitney.



### BENEFITS

- Even, thin developer coverage
- Enhances visibility of ultra-fine discontinuities
- Non-combustible powder

### SPECIFICATION COMPLIANCE

- AECL
- AMS 2644
- AMS 2647
- ASME
- ASTM E1417
- ASTM E165
- Boeing BAC 5423 PSD 6-46 or 8-4
- Boeing PS-21202
- GE P3TF2
- Honeywell EMS 52309
- ISO 3452-2
- MIL-STD-2132
- MIL-STD-271
- Pratt & Whitney 4356
- QPL SAE AMS 2644

### APPLICATIONS

**Defect location:** open to surface

**Ideal for:**

- Castings
- Welds and forgings
- Turbine components
- Critical components

**Defect examples:**

- Cracks
- Seams
- Porosity

### USE RECOMMENDATIONS

NDT Method	Fluorescent Penetrant Testing (Type 1)
Form(s)	a
Type 1 Penetrant Methods	A, B, C, and D
Usage Temperature	40 to 125°F / 5 to 52°C
Storage Temperature	50 to 86°F / 10 to 30°C
Required Equipment	UV light source

## PROPERTIES

<b>Particle Size</b>	< 30 µm
<b>Density</b>	15 lb./ft. <sup>3</sup> (240 kg/m <sup>3</sup> )
<b>NPE-Free</b>	Yes

## INSTRUCTIONS FOR USE

ZP-4D may be applied by dusting, spraying, or dipping. Dipping is the least preferred method of application as some indication scrubbing can result and developer can become contaminated quickly with penetrant. Electrostatic spray application is possible, but care is required to prevent excessive developer build-up which will mask indications. For best results, allow a minimum of ten minutes for developing time before inspecting.

## PACKAGING

<b>Packaging</b>	<b>Country of Origin</b>	<b>Part Number</b>
10 lb / 4.53 Kg	USA	01-3330-69
20 lb / 9.07 kg		01-3330-75
5 kg tub	UK	055C084

## HEALTH AND SAFETY

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the product Safety Data Sheet, which is available at [www.magnaflux.com](http://www.magnaflux.com).