

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
- 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

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

10 lb / 4.53 kg pail	01-3330-69
20 lb / 9.07 kg pail	01-3330-75



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