

ZL-27A

Level 3 Post Emulsifiable Fluorescent Penetrant

Post-emulsifiable ZL-27A is a Level 3, high-sensitivity Type 1 penetrant designed for inspections which require maximum process control and reliability, such as safety-critical aerospace testing.

Since ZL-27A is not water soluble, there is minimal risk of this penetrant being removed from a fine or shallow defect through over-washing to provide the highest reliability of any penetrant inspection method.

ZL-27A has a high flash point and provides long tank life when used in open dip tanks, but this penetrant can also be applied in a variety of other ways, including electrostatic spray.

To remove surface ZL-27A penetrant before developer application, use ZE-4E Method B lipophilic emulsifier or ZR-10E Method D hydrophilic emulsifier can be used.

ZL-27A is listed on the QPL SAE AMS 2644 Qualified Product List and is approved for use by Pratt & Whitney.



BENEFITS

Improve indication detection

- Clear, bright indications are easier to detect due to high UV and thermal stability – even for small flaws and discontinuities
- Indications stand out more since background fluorescence is minimized; emulsifiers only remove surface penetrant without the risk of over-washing

Maximize penetrant inspection process control

- Prevents over-washing since ZL-27A cannot be removed with water (unless combined with an emulsifier)
- PE penetrant system is less susceptible to human error since only surface penetrant is removed in the final rinse stage

Wide range of inspections

- Inspect a wide range of high-value components without fear of corrosion or specification non-conformance
- Meets all major industry and NDT specification requirements, including Aerospace Prime and OEM specs, AMS 2644 and ISO 3452

Maximize operator comfort and safety

- Promotes better inspection quality by providing the operator with a more comfortable work environment
- Reduces discomfort from strong odors
- Exceeds all EHS requirements

FEATURES

- Level 3 high sensitivity
- Post emulsifiable
- Bright indications
- Resists over-washing or over-removal
- High flash point
- Wide range of application methods
- Low odor
- Very low toxicity
- Alloy compatibility
- High thermal resistance
- High UV stability
- QPL SAE AMS 2644 Qualified Product List
- Approved for use by Pratt & Whitney

SPECIFICATION COMPLIANCE

- AECL
- AMS 2644
- ASME BPVC
- ASTM E1417
- ASTM E165
- Boeing BAC 5423 PSD 6-46 or 8-4
- Boeing PS-21202
- ISO 3452
- MIL-STD-2132
- MIL-STD-271
- NAVSEA T9074-AS-GIB-010/271
- Pratt & Whitney PMC 4353
- QPL SAE AMS 2644

PROPERTIES

Flash Point	> 200°F / 93°C
Density	0.93 g/cc / 7.72 lb/gal
Viscosity (at 100°F / 38°C)	9.65 cs
NPE-Free	Yes

APPLICATIONS

Defect location: open to surface

Ideal for:

- Detecting fine discontinuities
- Critical components
- Precision castings
- Precision forgings
- Machined components
- Immersion dip tank
- Electrostatic spray

Defect examples:

- Fine cracks
- Seams
- Porosity

USE RECOMMENDATIONS

NDT Method	Penetrant Testing, Fluorescent
Type	1
Method(s)	B / C / D
Sensitivity Level	3, high sensitivity
Required Equipment	UV light source
Usage Temperature	40 to 125°F / 5 to 52°C
Storage Temperature	50 to 86°F / 10 to 30°C

PACKAGING

1 gal / 3.78 L, case of 4	01-3187-35
5 gal / 18.9 L pail	01-3187-40
20 gal / 75.7 L drum	01-3187-30
55 gal / 208 L drum	01-3187-45



7952 Nieman Road, Lenexa, KS 66214-1560 USA
 Phone: 913-685-0675, Fax: 913-685-1125
www.ndtsupply.com, sales@ndtsupply.com