

ZL-19

Level 1 Water Washable Fluorescent Penetrant

A water-removeable Level 1 penetrant, ZL-19 is designed for use on rough or unmachined surfaces such as castings and forgings to find larger discontinuities in non-safety critical components. It is ideal for inspecting automotive and general industrial components such as engine cylinder blocks, power train components, rocker arms, pistons, steering knuckles, etc.

ZL-19 washes off parts with ease, leaving less background for clearer indications – even on rough surfaces. The quick rinsing reduces water usage in the inspection process which helps users reduce their over-all cost per part by reducing penetrant loss through drag-out, speeding up the washing and inspection process, and cutting rinse water costs.

ZL-19 can be used with ZP-4B dry powder developer, with ZP-5B water suspendible developer in an agitated tank or with ZP-9F non-aqueous developer. With a UV-A light source, indications will appear as a bright green-yellow fluorescence.

ZL-19 is listed on the QPL SAE AMS 2644 Qualified Product List.



BENEFITS

Increase indication detection on cast parts & rough surfaces

- Increase detection of defects in cast parts, such as hot tears, laps, or cold shuts
- Indications stand out more because of reduced background fluorescence, even on rough cast surfaces

Speed up your inspection process

- Quickly apply and remove penetrant due to high surface wetting and easy washability
- ZL-19 is spray-friendly and will not clog nozzles in automated lines, for less maintenance downtime

Performance value

- Use less penetrant per part, thanks to lower drag out
- Penetrant can be reused from the dwell cycle, so more of it stays in your tank instead of getting carried away on parts

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 1 sensitivity
- Water washable
- Excellent rough surface washability
- Bright, high contrast indications
- Clean rinsing on cast parts
- Won't clog spray nozzles in automated systems
- Good surface wetting
- High flash point
- Easy washability
- Less time to rinse
- Use less penetrant per part

APPLICATIONS

Defect location: open to surface

Ideal for:

- Castings
- Forgings
- Rough surface finish
- Unmachined parts
- Engine cylinder blocks
- Power train components
- Rocker arms
- Pistons
- Steering knuckles
- Automated penetrant lines

Defect examples:

- Cracks
- Seams
- Cold shuts
- Delamination
- Porosity
- Hot tears
- Laps

PROPERTIES

Flash Point	> 200°F / 93°C
Density	0.85 g/cc / 7.08 lb/gal
Viscosity (at 100°F / 38°C)	5.62 cs
NPE-Free	Yes

SPECIFICATION COMPLIANCE

- AECL
- AMS 2644
- ASME
- ASTM E1417
- ASTM E165
- Boeing BAC 5423 PSD 6-46 or 8-4
- Boeing PS-21202
- MIL-STD-2132
- MIL-STD-271
- NAVSEA T9074-AS-GIB-010/271
- QPL SAE AMS 2644

USE RECOMMENDATIONS

NDT Method	Penetrant Testing, Fluorescent
Type	1
Method(s)	A / C
Sensitivity Level	1, low 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

5 gal / 18.9 L pail 01-3263-40
 55 gal / 208 L drum 01-3263-45



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