

# ZYGLO<sup>®</sup> FLUORESCENT WATER WASHABLE PENETRANTS

## ZL-15B, ZL-19, ZL-60D, ZL-67 and ZL-56

### CLASSIFICATION

- Type 1, Method A Water Washable (Non Water-Based) Penetrants
- Type 1, Method C Penetrants when using SKC-S Cleaner/Remover

### GENERAL DESCRIPTION

Zyglo<sup>®</sup> Fluorescent Water Washable Penetrants are used to check for cracks in a wide range of applications. The penetrant fluoresces a greenish-yellow color under ultraviolet radiation and meet OSHA requirements for Class III B liquids (due to their high flash point) and can be used in open dip tanks. Use of a black light source with a peak wavelength of 365 nm, such as the Magnaflux<sup>®</sup> ZB-100F Fan Cooled Black Light, is recommended.

### TYPICAL PROPERTIES (Not a specification)

Typical Properties	ZL-15B	ZL-19	ZL-60D	ZL-67	ZL-56
	Level ½	Level 1	Level 2	Level 3	Level 4
Viscosity @ 100°F (cs)	5.1	5.8	10.7	23.5	18.3
Flash Point (PMCC)	>200°F	>200°F	>200°F	>200°F	>200°F
Sulfur (ppm)	<1000	<1000	<1000	<1000	<1000
Chlorine (ppm)	<1000	<1000	<1000	<1000	<1000
Density (g/cc)	0.880	0.880	0.920	0.985	1.010
Density (lbs./gal)	7.3	7.3	7.7	8.3	8.4
Sodium (ppm)	-	<100	<100	<100	-
Fluorine (ppm)	-	<50	<50	<50	-
VOC			304 g/l	89 g/l	350 g/l
NPE- Free	Yes	Yes	Yes	Yes	Yes

### METHOD OF APPLICATION

Test parts must be clean, free of all oil, grease or other foreign contaminating substances and dry before penetrant is applied. Water washable penetrants may be applied by immersion, dip, brush or flow-on, conventional or electrostatic spray. The area to be inspected must be completely covered with penetrant.

**Warning!** Penetrants attack and even dissolve many kinds of plastic pipe. Polyvinyl chloride (PVC) pipe is especially vulnerable, and can crumble after only a few days of exposure. Even diluted penetrant rinsings attack it rapidly. ABS plastic pipe is nearly as sensitive. When installing plumbing to handle penetrant rinsings, use metal pipe.

**PLASTICS COMPATABILITY**

Penetrant materials are typically compatible with nylon, teflon, acetal, polypropylene, and epoxies. However, it is still recommended that the penetrant be evaluated for compatibility on actual test pieces. Penetrants may stain, soften, or even dissolve plastic materials.

**PENETRATION - DWELL TIME**

The generally accepted minimum penetration time is 10 minutes, although specific process specifications may require longer dwell times.

**TEMPERATURE**

Water washable penetrants are generally used between 40°F - 125°F.

**PENETRANT REMOVAL**

Penetrants are generally removed by water spray with a wash temperature envelope of 50°F to 100°F.

**DEVELOPER APPLICATION**

Zyglo<sup>®</sup> developers should be used to maximize the sensitivity of our penetrants. Aqueous developers are applied prior to drying, dry powder and non-aqueous developers after drying.

**Warning!** Parts should not remain in aqueous developers for any length of time, as the penetrant sensitivity could be impaired.

**RECOMMENDED DEVELOPERS**

The following developers are recommended for use.

- . ZP-4B Dry Powder Developer
- . ZP-9F Non-Aqueous Developer
- . SKD-S2 Non-Aqueous Developer
- . ZP-5B Water Suspendible Developer

**SPECIFICATION COMPLIANCE:**

AMS 2644, ASME B & PV Code, Sec. V, MIL-STD-271, MIL-STD-2132, Boeing BAC 5423 PSD 6-46 or 8-4, Boeing PS-21202, ASTM E 165, AECL, ASTM E 1417.

**PACKAGING**

ZL-15B 5 Gal. Pail, 20 and 55 Gal. Drums

ZL-19 5 Gal. Pail and 55 Gal. Drums

ZL-60D 5 Gal. Pail, 20, and 55 Gal. Drums, Aerosols

ZL-67 5 Gal. Pail, 20, and 55 Gal. Drums

ZL-56 5 Gal. Pail and 55 Gal. Drums

**COVERAGE**

(1) Gal. covers approximately 1,000 square feet.

(1) 16 oz. aerosol can covers approximately 65 square feet.