

ZE-4E

Lipophilic Emulsifier

A Method B lipophilic emulsifier, ZE-4E diffuses into the penetrant to clear the penetrant from the surface of the part being inspected. It is rinsed from the part by water, carrying penetrant off the part surface. Designed to be used with post-emulsifiable penetrants ZL-2C, ZL-27A or ZL-37. Benefits include low volatility and a high flash point, so ZE-4E can be used in open immersion tanks.

ZE-4E is listed on the QPL SAE AMS 2644 Qualified Product List.



BENEFITS

- Low volatility
- High flash point

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
- QPL SAE AMS 2644

APPLICATIONS

Defect location: open to surface

Ideal for:

- Castings
- Forgings
- Extrusions

Defect examples:

- Cracks
- Seams
- Laps
- Porosity

PROPERTIES

Flash Point	> 240°F / 121°C
Density	7.71 lb/gal (926 g/L)
Viscosity (at 100°F / 38°C)	21.47 cs
NPE-Free	Yes

USE RECOMMENDATIONS

NDT Method	Penetrant Testing
Method(s)	B
Usage Temperature	40 to 125°F / 5 to 52°C
Storage Temperature	50 to 86°F / 10 to 30°C
Coverage	1 gal will cover approximately 1,000 ft ² / 93 m ²

INSTRUCTIONS FOR USE

ZE-4E can be applied by immersion or flowing, with immersion being the recommended method. The penetrant-covered part is completely covered with emulsifier and allowed to drain for a predetermined length of time, then washed with water to remove the penetrant/emulsifier mixture. The emulsification time will vary depending upon the penetrant used, part surface finish, specification requirements and the desired results.

The emulsification time for ZE-4E ranges between 30 seconds and three minutes for Type 1 penetrants depending on specifications. This time must be monitored closely to get the best results.

PACKAGING

5 gal / 18.9 L pail	01-3550-40
20 gal / 75.7 L drum	01-3550-30
55 gal / 208 L drum	01-3550-45



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