



ER-85 Method B Emulsifier

Technical Data Sheet

Description: ER-85 is a lipophilic emulsifier used in the inspection penetrant process to remove excess surface penetrant. ER-85 is a Method B emulsifier. It does not require a pre wash step and is used at full strength. It meets the requirements for low sulfur, low halogen, and low-sodium.

Chemical Properties

Color: Pinkish
Viscosity: 22.0
Flash Point: > 230°F (110°C)
Water Content: <0.5%

Companion Products

DP-40, FP-22B, RC-29, RC-50, RC-65, RC-77, RC-88

Packaging

One Gallon Cans 55 Gallon Drums
Five Gallon Cans

Storage/Shelf Life

Keep away from moisture and sunlight.
Temperature limit: 40°F to 125°F (0-50°C)
Keep the container closed when not in use.
Shelf life from invoice date: Bulk Container – 36 months

Specifications

SAE AMS 2644 & QPL – Method D Remover	
MIL-I-25135 Revisions C, D & E	ASME Code NDT, Sec V
Lockheed Martin	Boeing
Rolling Royce	Honeywell
Turbomeca	Northrup Grumman
Airbus	General Electric



Special Features

1. Low to near zero background for assured indication visibility.
2. Long material tank life due to formula stability and non-volatility.
3. Minimizes the risk of over – emulsification.
4. Clean, odorless product, vapor free atmosphere.

Instructions

Note: These instructions describe the basic process, but they may need to be amended by the user to comply with applicable specification and /or inspection criteria provided by the contracting agency.

1. **Application:** Apply non-water washable penetrant only to clean, dry surfaces by spraying, flowing, brushing or dipping.
2. **Dwell Time:** A 10 minute dwell time is suggested, although in many cases five minutes will suffice. When particularly tight cracks are suspected, or the part is especially critical, the dwell time may be extended to 30 minutes, or longer. Allow the penetrant to drain from the part surface back into the penetrant tank to conserve material.
3. **Removal:**
 - A) **Emulsification:** Following the dwell, dip the part into undiluted lipophilic emulsifier. Remove the part, and allow the excess emulsifier to drain back into the tank. Parts with rough surfaces require longer drain times.
 - B) **Rinse:** Use a coarse plain water spray to remove all traces of the emulsified penetrant.
4. **Drying:** A re-circulating oven set no higher than 160°F (71°C) is suggested. Leave the part in the oven just long enough to evaporate surface moisture. Drying is improved by using pressurized air to disperse and remove as much excess water as possible before placing the part into the oven.
5. **Developing:** Apply the developer by cloud, dusting, spray or dip using the appropriate developer. Flaw marks are visible under appropriate lighting almost immediately, but allow sufficient developing time to enhance the flaw visibility.
6. **Inspection:** Inspect parts under appropriate light.

Health & Safety

ER-85 is a combustible liquid. Use with adequate ventilation and away from sparks, fire or open flames. Avoid prolonged or repeated contact with skin. Do not take internally. Consult the MSDS for more safety and health information.