



# ER-83B

## HYDROPHILIC EMULSIFIER

Technical Data Sheet

### Approvals and conformities

EADS  
GE  
ISO 3452-2  
PRATT & WHITNEY  
QPD-AMS 2644  
ROLLS ROYCE  
SAFRAN

**Manufacturer SHERWIN (USA) / NDT-EUROPA (NL)**

### Description / Application:

Concentrated product to be diluted in water to emulsify the excess of post-emulsifiable penetrants such as the RC-series.

**Companion products:** Cleaner N120, DR-62

Remover N106A, DR-60

Developer D-100, D-106

Dry developer D-90G

All post-emulsifiable penetrant Sherwin RC-XX

## ***DIRECTIONS FOR USE***

### 1. Spraying:

A highly diluted solution of ER-83B is sufficient (0.1% to 3%). However, a greater concentration may also be used (5%).

The concentration is to be determined according to:

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- Pre-washing result,
- Surface condition,
- Attractiveness between part surface and penetrant
- Strength of the spray,
- Dwell time of the emulsifier (washing time + time elapsed before rinsing).

## 2. Immersion:

It is recommended to pre-wash parts to eliminate as much excess of penetrant as possible due to mechanical action of water. Then, dip the parts into an ER-83B solution, let drain and rinse with water.

**Note 1: it is not necessary to move the parts during immersion, nor to stir the emulsifier.** As there is no mechanical agitation or action other than the incoming and outgoing movement, plus the final rinsing, a solution more concentrated than for spraying is required to eliminate the penetrant. The typical concentration is 5 to 20%, but, depending upon the case, more diluted or more concentrated solutions can be used.

### Note 2:

ER-83B concentration should be regularly checked. The superficial tension of the mixture being very low, water evaporates significantly more quickly than observed on pure water. Therefore, water should be added regularly, because increased concentration inevitably causes greater activity for the emulsifier. The emulsifier concentration in water can be measured using a refractometer. In addition, penetrant content of the ER-83B solution should be checked, because contamination with penetrant interferes with the emulsifying process and, after some time, the ER-83B solution should be replaced. Bubbling is useful to oxygenate the bath and avoid odours of anaerobic bacteria.

## TECHNICAL CHARACTERISTICS

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- Very low halogen and sulfur content
- Compatible with all metals and certain plastics
- With anti-corrosion capabilities

Recommended dilution :

- Immersion : < 20 % (maximum homologated 30%)
- Spraying : 0,1 to 3 %

### Biodegradability :

According to the biodegradability test in aerobic and according to OECD 302 B criteria, ER-83B has shown capacities at inherent biodegradability.

The sample of ER-83B is 'inherent biodegradable without pre-adaptation' and further evidence of

an "ultimate inherent biodegradability" according to OECD criteria extrapolated to a finish product. The result is positive (biodegradability >70%) but this does not mean that the effluents of ER-83B can be released into natural environments, however an effluent discharge into water treatment plant is entirely possible: contact the entity managing the wastewater networks in your area.

Appearance ..... pinkish liquid  
Maximum water content ..... 2%  
Flash point ..... > 93°C  
Viscosity ..... 29 mm<sup>2</sup>/s +- 10 % at 38°C

## ***PRECAUTIONS FOR USE AND STORAGE***

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**Transport / Handling:** Refer to Material Safety Data Sheet (MSDS).

**Storage :** Keep away from moisture

Temperature range: 0°C à 50°C

Keep packaging closed after taking out some of the product

**This technical data sheet replaces and cancels the previous one.**

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