

## Penetrant Remover / Hydrophilic Emulsifier

### 1 General Description

Ardrox<sup>®</sup> 9881 is a blend of biodegradable surface active agents, coupling solvent and corrosion inhibitors. It is low in sulphur, halogen and alkali metal content. In addition to that Ardrox<sup>®</sup> 9881 shows an improved odor and bath stability and it is designed to meet the latest surfactant regulations.

Ardrox<sup>®</sup> 9881 is a hydrophilic type emulsifier used for the removal of the new Ardrox<sup>®</sup> 981x series of post-emulsifiable, fluorescent penetrants (Method D).

### 2 Physical and Chemical Properties

Property	Unit	Typical Value	Test Method
Appearance	-	Clear, orange liquid	-
Density at RT	g/ml	1.01	-
ph at 100 g/l	-	8.2 – 9.2	-

### 3 Chemicals Required

Ardrox<sup>®</sup> 9812, Ardrox<sup>®</sup> 9813 or Ardrox<sup>®</sup> 9814 (depending on the required sensitivity level), Ardrox<sup>®</sup> 9881, Ardrox<sup>®</sup> 9D4A or Ardrox<sup>®</sup> 9D1B.

### 4 Operation Procedure

The procedure described below is recommended for general use. Where relevant, the process specifications of the approving authorities must be closely followed.

After suitable pre-cleaning, penetrant application and the necessary penetrant contact time, the components are initially given either a spray or air agitated water rinse (for approx. 1 minute) before they are immersed in the Ardrox<sup>®</sup> 9881 solution. The recommended concentration is up to 10% by volume in water.

Please note: Ardrox<sup>®</sup> 9881 is approved to AMS 2644 to a maximum of 10 % concentration.

The components should be completely immersed, withdrawn and allowed to drain. The total contact time should be determined experimentally and will be dependent on the material and its surface finish. The time should be adjusted to the shortest possible contact time to give the minimum acceptable level of background. The contact times below serve as a guide only.

Immersion time: 30 sec. to 90 seconds  
 Drain time: 30 seconds

Drainings may be returned to the Ardrox<sup>®</sup> 9881 tank. After a suitable period of contact, the components are thoroughly rinsed either by spray rinsing or using air agitated water for the minimum period needed to give an acceptable level of background fluorescence.

The components should then be thoroughly dried in an air-circulating oven at a temperature between 50 – 60 °C using the minimum drying time before application of the developer (15 minutes maximum).

For touch-up applications Ardrox<sup>®</sup> 9881 is also available in aerosol cans. As ready-to use product the concentration is 5%.

#### Approvals:

Society of Automotive Engineers – AMS 2644  
Pratt & Whitney – FPM Master Supplement  
Pratt & Whitney – PMC 4355-6  
Rolls-Royce – OMat 621K  
Rolls-Royce – CSS232  
SAFRAN Group – IN 5000  
MTU Aero Engines – MTH 1079  
General Electric Commercial Engines – as per AMS 2644  
CFM International – as per AMS 2644

#### Conformances:

CEN ISO – EN ISO 3452-2  
ASME – Boiler & Vessel Code, Section V, Article 6

## 5 Effects on Material

When Ardrox<sup>®</sup> 9881 is used in the prescribed manner, no significant corrosion is likely to be encountered on commonly used metals.

## 6 Safety Guidance

Before operating the process described it is important that this complete document, together with any relevant Safety Data sheets, is read and understood. For transport, storage, use and waste treatment of chemicals in concentrated or diluted form as well as bath solutions, the appropriate local legislation must be followed. Further specific information on the products can be obtained from the relevant Safety Data Sheets. The user should also pay strict attention to information and hazard symbols shown on product labels.

Version 09-25-2013  
replaces version from 10-23-2012

**Head Office**  
Chemetall GmbH  
Trakehner Straße 3  
60487 Frankfurt am Main  
Germany

T +49 69 7165 0  
F +49 69 7165 3018  
[surfacetreatment@chemetall.com](mailto:surfacetreatment@chemetall.com)  
[www.chemetall.com](http://www.chemetall.com)

® registered trademark.

The above details have been compiled to the best of our knowledge on the basis of tests and research work and with regard to the current state of our practical experience. This technical product information is non-binding. No liabilities or guarantees deriving from or in connection with this leaflet can be imputed to us. Statements relating to possible uses of the product do not constitute a guarantee that such uses are appropriate in a particular user's case or that such uses do not infringe the patents or proprietary rights of any third party. The reproduction of any or all of the information contained in this leaflet is expressly forbidden without Chemetall's prior written consent.

© Copyright 2013 Chemetall GmbH Frankfurt am Main, Germany.