Ardrox® 1873B

TURBINE ENGINE COMPONENTS DESCALER

1 Description

Ardrox® 1873B is a concentrated liquid and mildly acidic mixture of sequestrants and surfactants. Ardrox® 1873B has been formulated specifically to descale the chrome steels, stainless steels, nickel and cobalt alloys used in the manufacture of aircraft turbine engines. During service these parts become covered with hard adherent oxide scale, which must be removed during overhaul periods to enable penetrant inspection processes to be carried out.

2 Physical and chemical properties

Property	Typical Value	Unit
Appearance	Clear, pale yellow liquid	-
Density (undiluted)	Approx. 1.18 @ 20 °C / 68 °F	g/ml
pH (undiluted)	4.5 @ 20 °C / 68 °F	-

These are typical values only and do not constitute a specification.

3 Application

Ardrox® 1873B is used diluted with water at a concentration of 50 % by volume in water. The operating temperature is 80 °C – 85 °C (176 °F – 185 °F). Parts should be free from oil and carbonaceous deposits.

Ardrox® 1873B is normally used in conjunction with Ardrox® 185L and Ardrox® 1435 and a typical process cycle would be:

1)	Ardrox® 185L	at 85 °C (185 °F)
2)	Ardrox® 1873B	at 80 °C – 85 °C (176 °F – 185 °F)
3)	Ardrox® 1435	at 90 °C – 100 °C (194 °F – 212 °F)
4)	Ardrox® 1873B	at 80 °C – 85 °C (176 °F – 185 °F)

Immersion times should be approximately 15 minutes for each stage. Since Ardrox® 1873B solutions are acidic and Ardrox® 1435 solutions are alkaline, each process stage must be followed by a thorough water rinse.

Should complete cleaning not be achieved, stages 3 and 4 may be repeated as required. When dealing with heavy scale, it is better to use several cycles of approximately 15 minutes rather than giving extended immersion times.

4 Effects on materials

When Ardrox® 1873B is used in the prescribed manner no significant corrosion will occur on ferritic stainless steels and nickel and cobalt heat resisting alloys.

Titanium stabilized 318 stainless steel is suitable for the construction of tanks and heating element sheaths.

5 Shelf life, storage and disposal

Please refer to the corresponding Material Safety Data Sheets for details on shelf life, storage and disposal.

6 Labor and environmental protection

Before operating the process described it is important that this complete document, together with any relevant Safety Data sheets, be read and understood.

All local and national regulations on the transport, storage, use and waste treatment of chemicals in concentrated or diluted form and as working solutions must be obeyed.

7 General Information

Chemetall supplies a wide range of chemical products and associated equipment for cleaning, descaling, paint and carbon removal, metalworking and protection and non-destructive testing. Sales Executives are available to advice on specific problems and applications.

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.

Headquarters and Regional Head Office Europe, Middle East, Africa, South America
Chemetall GmbH
Trakehner Straße 3
60487 Frankfurt am Main, Germany
Tel: +49 (0) 69 7165-0

Regional Head Office North America
Chemetall US, Inc.
675 Central Avenue
New Providence, NJ 07974, USA
Tel: +1-908-464-6900

Regional Head Office Asia-Pacific
Chemetall Asia Pte Ltd.
12 Loyang Crescent
Singapur 508980
Tel: +65 6885 7900

www.chemetall.com | surfacetreatment@basf.com

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