

Scope

ARDROX 1218 is a blend of phosphoric acid and inhibitors. It will remove rust, heat treatment scale and welding scale from ferrous metals. Corrosion products on aluminium, copper and zinc alloys may also be removed.

ARDROX 1218 is especially suitable for use on chromium plated ferrous materials and ferrous surfaces which require very close tolerances.

Chemicals required

ARDROX 1218

Testing chemicals required

Indicator solution No.1 (phenolphthalein)

Indicator solution No.11 (bromophenol blue)

Testing solution No.1 (0.1N sodium hydroxide solution)

Method of use

ARDROX 1218 is normally used diluted with water at a strength of between 10% and 50% (v/v). The actual concentration required will depend upon the amount of rust, scale or other corrosion to be removed. ARDROX 1218 may be used at temperatures from ambient to 60°C. At the higher temperatures the rate of removal of rust etc. will be greatly increased.

If components for treatment have any oil or grease on them, this should be removed prior to treatment by use of a cleaning agent such as ARDROX 9PR50A (solvent cleaner) or ARDROX 6333 (detergent cleaner).

Treatment in ARDROX 1218 should be followed by thorough rinsing in hot water. Components should then be dried as quickly as possible in order to prevent rusting. A dewatering/short term protective compound such as ARDROX 3961 may also be used to prevent corrosion occurring. Longer term protection may be obtained by subsequent treatment in ARDROX 311 or ARDROX 3302.

Method of control

Restore the volume of the tank to its original level, if necessary, by adding water. Thoroughly mix and take a sample of 50-100ml. After allowing to cool to ambient, pipette 10ml into a 100ml volumetric flask and allow the pipette to drain for approx. 30 min. Make up to the mark with distilled water. Pipette 10ml aliquots of this solution into two Erlenmeyer flasks and add 50ml distilled water. To one flask add a few drops of Indicator No.1 and to the other add a few drops of Indicator No.11. Titrate the two samples against Testing solution No.1. The titration value (TV) = Indicator No.1 titration (ml) minus Indicator No.11 titration (ml).

On a highly contaminated solution, the indicator colour change may be difficult to see. In this case it is recommended that the titrations are carried out using a pH meter, taking the end points at pH 4.5 and 9.0. The titration value (TV) = pH 9.0 titration minus pH 4.5 titration.

For each 1.0ml that TV is lower than that given in the table below for the strength required, add 22.8 litres of ARDROX 1218 for each 1000 litres of solution present.

Concentration (% v/v ARDROX 1218)	Titration Value (ml)
10	5
25	13
50	26
75	39

Effects on materials

ARDROX 1218 is inhibited against attack on ferrous metals. Copper, zinc and aluminium alloys are all, to some extent, attacked by ARDROX 1218 solutions.

Technical information

Appearance: Clear, colourless, viscous liquid.

Density (20°C): 1.26 g/ml.

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

Protect from freezing conditions. Keep container sealed.

Equipment materials

Stainless steel, high density polythene, polypropylene and rigid PVC may be used for tank construction.

Safety guidance

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

General information

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

Labour and environmental protection

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.

Further specific information on the products can be found in the EC Safety Data Sheets supplied. The user should also pay strict attention to information and hazard symbols shown on product labels.

Waste disposal

All waste waters must be treated in accordance with national legislation and local regulations prior to discharge to the sewer.

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