Process Instructions

Ardrox® 6485 A

Aircraft exterior cleaner.

1 Process Description

Ardrox® 6485 A is a new generation, heavy duty, thixotropic, alkaline cleaner for the exterior and interior cleaning of aircraft and ground handling equipment. It can also be used as a decarboniser for engine and component cleaning.

Ardrox® 6485 A is a liquid concentrate consisting of biodegradable surfactants, alkaline additives and corrosion inhibitors to provide a more effective and safer aircraft exterior cleaner. It is designed to meet the latest regulations and future environmental standards; in particular, it is free from borates.

2 Process Sequence

Ardrox® 6485 A is typically used as part of a process; typically

Ardrox® 6485 A cleaner application;

dwell;

agitate;

water rinse.

Chemetall Ltd can advise on the optimum process sequence to meet your individual requirements.

3 Chemicals Required

Ardrox® 6485 A	cleaner

4 Process Operation

Depending on the soil to be removed, Ardrox® 6485 A can be used as supplied or diluted with water. Diluting with water will destroy the thixotropic properties.

4.1 Aircraft Exterior Washing

For general wet washing, a dilution of one part Ardrox® 6485 A to 4 - 9 parts water should be used. Spray onto the surface, agitate with brushes, pads or mops if necessary, then rinse off with water.

4.2 Heavy Duty Aircraft Exterior Cleaning

4.2.1 Gear Well and Flap Cleaning

For heavy duty cleaning use Ardrox® 6485 A as received. Spray on a heavy uniform film and allow 5 - 10 minutes dwell time. Agitate with brushes, pads or mops if necessary, then rinse with water.

4.2.2 Nacelles, Exhaust Tracks, Thrust Reverser Cleaning

Same procedure as 4.2.1.

4.2.3 Dry Washing

Apply a light film of Ardrox® 6485 A as received by mist spray, pad or mop. Agitate as necessary, mop dry with clean dry aircraft mops.

4.3 Aircraft Interior Cleaning

Dilute one part Ardrox® 6485 A with 9 - 19 parts water. Apply the solution by spray, rag or mop; rub the area to be cleaned, then wipe dry with a clean rag or mop head.

4.4 Decarboniser / Degreaser

Ardrox® 6485 A can be used either as received or diluted to 50% v/v in an immersion tank or 10% v/v in a spray washing machine. The solution can be heated to 65ºC if necessary.

After cleaning, the components should be thoroughly water rinsed.

5 Process Maintenance

Typically, Ardrox® 6485 A is used in a total loss system, so there is no method of control.

When used by spray or immersion, the performance of the Ardrox® 6485 A process is controlled by measuring the Total Alkali Pointage, and replenishing to maintain the parameters within the optimum range.

These measurements should be determined regularly, the frequency of at least once per day / shift. Chemetall Ltd can advise whether more frequent or less frequent checks of one or all parameters is necessary.

5.1 Total Alkali Pointage

5.1.1 Test Method

Pipette 10.0 ml of process bath solution into an Erlenmeyer flask, add approx. 50 ml of demineralised water and several drops of bromocresol green indicator solution. Titrate with 0.1 N sulfuric acid testing solution until the solution colour changes from blue-green to yellow-green: the number of ml used is the Total Alkali Pointage.

Ardrox® 6485 A % v/v = Total Alkali Pointage x 2.25

5.1.2 Replenishment

For each Total Alkali Point required, add per 1000 litres of process bath solution:

Ardrox® 6485 A	22.5 litres (23.2 kg)

6 Material Compatibility

Ardrox® 6485 A, used in the prescribed manner, has no significant corrosive effect on the majority of metals, including magnesium, aluminium, steel, cadmium-plated steel and titanium. It has no detrimental effect on good quality paints under normal conditions of use.

Ardrox® 6485 A does not cause hydrogen embrittlement on high strength steel or stress corrosion cracking on titanium.

6.1 Equipment Material

The plant should be made of such materials that are compatible with the process chemicals at the temperature and concentrations to which they will be exposed. Advice is best sought from plant suppliers, though experience has shown the following applicability:

6.1.1 Tank

Stainless steel 316 or 320;

Polypropylene (PP);

Polyethylene (HDPE)

7 Environment, Health and Safety Guidance

7.1 Storage

Store the chemicals in a cool place, with protection from freezing conditions.

7.2 Waste Disposal

All effluent discharge, or any accidental release, must be treated in accordance with national legislation and local regulations prior to disposal via the appropriate route.

7.3 Safety Guidance

Before using the process, ensure the Process Instructions and all relevant Safety Data Sheets have been read and all implications understood.

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