



TECHNICAL DATA SHEET

ESSECO AQUEOUS CLEANER M-AERO-NS

ESSECO AQUEOUS CLEANER CONCENTRATE

PRODUCT DATA AND TYPICAL PROPERTIES

Esseco Aqueous Cleaner M-AERO-NS is a NON SILICATED (NS) heavy duty, environmentally sensible, aqueous cleaner designed specifically for cleaning aluminium, magnesium and titanium alloys to rigorous aircraft industry specifications as well as other ferrous and non ferrous alloys. The unique chemistry of Esseco Aqueous Cleaner M-AERO-NS makes it ideal for use in ultrasonic, immersion, agitated batch washer and spray washer applications. This product exhibits oil splitting properties at elevated temperatures so may be used with skimming or coalescing filtering systems to extend bath life.

Odour	: slight odour of surfactants/detergents
pH (10% solution)	: 8.7 (approximately)
Flash Point	: none
Surface Tension	: 28 dynes/cm
Viscosity	: <100 cps

PRODUCT SPECIFICATION

Appearance	Pale straw to amber, clear to slightly hazy liquid.
Specific Gravity (25°C)	1.00-1.045
pH (25°C, neat)	8.8-9.4

APPROVALS

M-AERO-NS meets the following requirements:

- MIL-PFF-87937C, Cleaning Compound, Aerospace Equipment, Type II, Water Dilutable Cleaning Compound, Type IV, Heavy Duty Water Dilutable Cleaning Compound.
- Rolls Royce CSS 200 Control Procedures for the Purchase & Supply of Consumable Material used during Manufacture
- Rolls Royce CSS 204 Aqueous Cleaners

PERFORMANCE

Features

- Corrosion inhibited
- No silicate
- Versatile
- Unique formulation
- No ozone depleting potential
- No VOCs
- Not hazardous
- Lower pH (carbonate free)

- Low toxicity, no glycol ethers
- Low foaming
- Low BOD/COD values
- Not flammable

Benefits

meets aerospace test requirements
no surface build up (better coatings adhesion)
safe on variety of metals and plastics
superior cleaning results
environmentally friendly
no VOC permits required
no special safety or storage conditions
does not saponify esters contained in some cutting fluids
(prevents foam caused by soap formation)
worker safety
suitable for spray (with care) and immersion washing
easy disposal, simple effluent treatment
safe in all cleaning equipment

Product: ESSECO AQUEOUS CLEANER M-AERO-NS
Document Reference: PS 5NS

Issue No. 3

Issue Date: Dec 2012
Page 1 of 3



TECHNICAL DATA SHEET

SUBSTRATE COMPATIBILITY

Esseco Aqueous Cleaner M-AERO-NS is formulated specifically for cleaning aluminium, magnesium and titanium alloys. However, it is also suitable for ferrous, copper and a variety of other alloys and metals. These include:

Carbons Steels (AISI and SAE):

1010, 1020, 1030 carbon steels
4140 low alloy Cr and Mo steels
4340 low alloy Cr, Mo and Ni steels

Stainless Steels:

AISI – 304, 304L, 316, 316L
Super-austenitic, ferritic, martensitic alloys
Duplex stainless steel
Cast stainless steel

Nickel Alloys:

Monel
Inconel
Incoloy
Hastelloy

Titanium Alloys:

Grade 2
Grade 5
Grade 7
Grade 9
Grade 12

Magnesium Alloys:

Cast alloys

Cast Irons (high carbon steels):

SAE – G2500 (cast iron)
SAE – J434c (ductile iron)

Copper Alloys:

Yellow Brass
Admiralty Brass
Naval Brass
Nickel Aluminium Alloys
Copper/Nickel alloys

Aluminium Alloys:

AA 1100
AA 2024 high Cu
AA 3003
AA 4032
AA 5052
AA 6061
AA 7075 high Zn

SOILS AND CONTAMINANTS TO BE REMOVED

The following soils can be removed using Esseco Aqueous Cleaner M-AERO:

sulphur based cutting fluids
automotive oils
lithium grease
mineral oils
vegetable oils

WD 40/3-in-1 oils
polybutene oils
cycloparaffins
lipstick
stick wax 140

shop soils
loose grit
cooling fluids
cosmolines



TECHNICAL DATA SHEET

PROCESS CONTROL

The product is supplied as a liquid concentrate and diluted with water to 5 - 20% Esseco Aqueous Cleaner M-AERO-NS concentrate by volume. Aqueous Cleaner concentration in the wash bath can be measured and controlled by a simple titration using readily available test equipment.

Operating temperature range is 20 - 70°C. Low spray, mechanical or ultrasonic agitation is used to enhance cleaning.

Parts cleaned with Esseco Aqueous Cleaner M-AERO-NS can be rinsed with warm water prior to drying.

Oil Separation: Esseco Aqueous Cleaner M-AERO-NS rapidly splits oils to the surface of the wash solution to allow for separation and extending the bath life of the cleaning chemistry.

Water Hardness: Esseco Aqueous Cleaner M-AERO-NS is tolerant up to 150 ppm of total water hardness.

STANDARD PACKAGING

1000 litre Intermediate bulk containers (IBCs), 200 and 25 litre polyethylene drum

FOR HANDLING INFORMATION PLEASE CONSULT THE SAFETY DATA SHEET.

Product: ESSECO AQUEOUS CLEANER M-AERO-NS
Document Reference: PS 5NS

Issue No. 3

Issue Date: Dec 2012
Page 3 of 3