

# ECONOCLENSE ENF ELECTROLYTIC CLEANER FOR NON- FERROUS METALS

## INTRODUCTION

PMD Econoclense ENF is a buffered alkaline process particularly recommended for final stage anodic cleaning of copper, brass and zinc die-castings. Followed by an acid dip (such as PMD Econovate) it leaves the surface in an ideal condition for subsequent electroplating. Econoclense ENF may also be used on ferrous metals for certain applications.

## OPERATING DATA

For most applications, the operating parameters are:

Concentration	25 - 75 g/l (4 - 12 oz/gal)
Temperature	50 - 80 deg C (120 - 175 deg F)
Current Density	2 - 5 A/dm <sup>2</sup> (20 - 50 asf) anodic
Immersion Time	0.5 - 5 minutes

## MAKE-UP AND MAINTENANCE

Econoclense ENF is supplied as a dry powder, to be made up to the required concentration with water.

To check the concentration of the working solution, the following simple analysis method may be used:

Take a 25 ml sample of the solution. Using methyl orange indicator, titrate with 1N Sulphuric or Hydrochloric Acid to a pink end point.

ml acid required x 3.16 = concentration of Econoclense ENF in g/l.

**ECON ENF-06/02  
ISSUE 4**

**EQUIPMENT**

Tanks	Mild or stainless steel, or other materials suitable for use with alkaline solutions.
Heating	Electric immersion heaters (mild, stainless steel, PTFE or silica), steam, gas or high pressure hot water.

Temperature control is recommended to maintain optimum performance.

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**DISPOSAL**

Dispose of in accordance with local authority requirements.

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**PRODUCT FAMILIES**

The following products or product families are referred to in this data sheet:-

<u>Product</u>	<u>Product Code</u>
PMD Econoclense ENF	206006

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