PRODUCT INFORMATION

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EMERGENCY - MARTRON 704-289-1934
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MARTRON APA-2
WETTING AGENT FOR NICKEL PLATING BATHS

Martron APA-2 is a wetting agent for nickel plating baths.

Martron APA-2 can be replenished based on stalagmometer measurements.

Martron APA-2 will help insure pit free deposits in air agitated nickel-plating baths.

SECTION 1: SOLUTION COMPOSITION

	Optimum	Range
Martron APA-2	0.2%/vol	0.1 - 0.6%/vol (1.0 - 6.0 ml/Liter)
Surface Tension	47 dynes/cm	38 - 50 dynes/cm

Martron APA-2 contains wetting agents that help prevent pitting in air agitated nickel-plating baths. Under ideal conditions little or no anti-pitting agent is required, however small additions or maintenance additions of the **Martron APA-2** helps to insure a pit or pore free deposit. **Martron APA-2** is removed either by carbon batch treatment or carbon packed filter.

Excessive additions should be avoided as they may cause excessive foaming, generally additions over 0.6%/volume are not necessary and there is some other condition that is causing pitting.

Analysis for Martron APA-2 Concentration

Application

The following analysis method is applicable to semi-bright and bright nickel-plating solutions.

Equipment

Stalagmometer

Procedure

The concentration of the **Martron APA-2** can be determined by measuring the surface tension of the plating solution. This can be accomplished by preparing a set of standards. Prepare plating solutions having zero, 0.1%, 0.2%, 0.3%, and 0.6% by volume of **Martron APA-2** which then get tested with the stalagmometer. Each standard should be run 3 times to obtain accurate readings. The concentration is determined by the surface tension, number of drops, specific gravity and the construction of the stalagmometer.

Data

S= Surface tension of the sample (dynes/cm)
Sw=Surface tension of the reference liquid
N= Counted drops of sample

Nw= Water drop number engraved on stalagmometer
D= Density of sample in grams/ml
Dw= Density of water in grams/ml

$$\text{Surface Tension (dynes/cm)} = \frac{(Sw) \times (Nw) \times (D)}{(N) \times (Dw)}$$

SECTION 2: HANDLING and STORAGE

Martron APA-2 additives can produce temporary irritation when they come into contact with the skin. Therefore, care should be taken to prevent accidental eye and skin contact. Rubber gloves, a rubber apron, and protective goggles should be worn when handling **Martron APA-2** additives. In case of contact, immediately flush with copious amounts of water and scrub well with soap and water. **Martron APA-2** additives are stable on standing and have a shelf life in excess of two years.

FREEZABILITY: As with most chemical products, it is preferable that freezing be avoided. However, if freezing should occur during transportation or storage, directions for handling the products covered in this technical data sheet are as follows:

If **Martron APA-2** freezes, simply allow the container to completely thaw and bring to room temperature of 70° - 75°F/21° - 24°C. Thoroughly mix to bring back to original condition.

SECTION 3: NON-WARRANTY

The data in this bulletin is believed by ***Martron Inc.*** to be accurate, true and complete. Since, however final methods of use of this product are in the hands of the end-user and beyond our control, we cannot guarantee that the end-user will obtain the results described in this bulletin, nor can we assume any responsibility of the use of this product by the end-user in any process which may infringe the patents of third parties.