

METAL FINISHING PRODUCTS

Source: **Cincinnati, OH**

Alternate Names: **Mineral Acid Cleaner, Aluminum Cleaner, Phosphoric Acid, Pre-Bright Dip Cleaner**

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DESCRIPTION

342 AC is a clear phosphoric acid based liquid with an organic odor and a density of approximately 10.8 pounds per gallon. 342 AC is an environmentally-friendly cleaner with low foam retention and free of NPE.

| POTASHCORP PURIFIED PHOSPHATES PRODUCT CODES |
|--|
| 342 AC |

| PHYSICAL COMPOSITION | |
|--|-------------|
| CHEMICAL NAME(S) | % BY WEIGHT |
| Phosphoric acid (as H ₃ PO ₄) | ~ 43 |

| SPECIFICATIONS | | | |
|---|------|------|-------|
| | MIN. | MAX. | UNITS |
| Assay as H ₃ PO ₄ | 42.0 | 45.0 | % |
| Specific Gravity @ 60/60°F | 1.28 | 1.30 | – |
| Cloud Point | 95 | – | °F |

PACKAGES 55 gallon drum, bulk

SHIPPING Refer to SDS

SAFETY, STORAGE & HANDLING Refer to SDS

APPLICATIONS & OPERATING GUIDELINES

Application – For the superior removal of ground-in buffing compounds and drawing oils left after extruding, drawing, stamping or rolling aluminum. 342 AC is designed as a second stage cleaner following a mild, non-etching alkaline cleaner, but it may be used as a single stage cleaner where the soil load is light.

Addition – 342 AC is designed to operate at 8-9% by volume diluted with water.

Operation – Recommended operating temperature is 120-160 °F, depending on the amount of cleaning action desired. An increase of 20 °F approximately doubles the amount of cleaning action. (For uniform results, accurate temperature control is desirable.) Suggested immersion time is 2 minutes.

The cleaner tank should be of such construction as to hold phosphoric acid at the operating temperature required. (316L Stainless Steel, rubber-lined steel or fiberglass is recommended.)

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CLEANER BATH ANALYSIS

Reagents Required:

1. Sodium Hydroxide Solution (NaOH) 0.5N
2. Indicator Solution (Bromphenol Blue) Dissolve 0.1 g Bromphenol Blue in 7.1 ml of 0.02N Sodium Hydroxide and dilute to 250 ml with distilled water

Apparatus Required:

1. 250 ml Erlenmeyer flask
2. 10 ml burette
3. 10 ml pipette

Procedure:

1. Pipette 10 ml of the acid cleaner solution into the 250 ml Erlenmeyer flask.
2. Add about 40 ml of water and 2-3 drops of the indicator.
3. Titrate with the 0.5N Sodium Hydroxide (NaOH) to the end point (change from greenish yellow to the first distinct blue color or pH 4.5).

Calculation:

% cleaner (by volume) = ml of 0.5N NaOH x 0.92.

For further information or technical assistance, please contact:

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