

## Liquid Nickel Sulfate 134

Palm International's Liquid Nickel Sulfate 134 is specially produced for the demanding electroless nickel, surface finishing and other industrial markets. It is the purest form available commercially and is manufactured to demanding specifications from carefully selected raw materials. LNS 134 is subjected to stringent quality control standards and testing.

Store and handle as an acid solution in a cool ventilated area away from foodstuffs. Keep containers tightly closed.



### Concentration

10.0 percent nickel or 1.12 lbs of nickel metal per gallon or 5 lbs of  $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$  salt per gallon

### Appearance

Green Clear Liquid

### Contaminants

Measured in ppm

### Analysis:

| Parameter        | Specification    | Typical   |
|------------------|------------------|-----------|
| Nickel           | 133 - 135 g/l    | 134.0 g/l |
| pH               | 3.0 - 4.0        | 3.4       |
| Cadmium          | < 0.2 ppm        | < 0.1 ppm |
| Calcium          | < 5 ppm          | 0.7 ppm   |
| Cobalt           | < 1 ppm          | < 0.1 ppm |
| Chromium         | < 0.5 ppm        | 0.2 ppm   |
| Copper           | < 1 ppm          | < 0.1 ppm |
| Iron             | < 3 ppm          | 1.5 ppm   |
| Lead             | < 0.3 ppm        | < 0.1 ppm |
| Magnesium        | < 1.0 ppm        | 0.2 ppm   |
| Manganese        | < 0.5 ppm        | < 0.1 ppm |
| Zinc             | < 1 ppm          | < 0.1 ppm |
| Specific Gravity | 1.335 - 1.345 SG | 1.340 SG  |

### Shelf Life:

If stored at a temperature above 50°F, and in its original container, this solution has an indefinite shelf life.

### Packaging

5 gallon pails, 55 gallon drums, 275 totes and 4,000 gallon tankers.

### Storage/Safety:

Store and handle as an acidic solution.