

Liquid Nickel Sulfamate 24

Palm International's Liquid Nickel Sulfamate 24 is specially produced for use in the surface finishing industry and is the purest form commercially available. Palm's LNSF 24 is used for electroforming and other nickel solutions requiring exceptional purity. LNSF 24 is manufactured to demanding specifications from carefully selected raw materials. LNSF 24 is subjected to stringent quality control standards and testing.

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



Concentration

11.6 percent nickel or 24 ounce of nickel metal per gallon or 102 ounces of $\text{Ni}(\text{NH}_2\text{SO}_3)_2$ salt per gallon.

Appearance

Green Clear Liquid

Contaminants

Measured in ppm

Analysis:

Parameter	Specification	Typical
Nickel	180-183 g/l	181.5 g/l
pH	4.2 - 4.7	4.5
Ammonia	< 100 ppm	75 ppm
Cadmium	< 1 ppm	< 0.1 ppm
Calcium	< 5 ppm	< 0.6 ppm
Chloride	< 10 ppm	5 ppm
Chromium	< 1 ppm	0.1 ppm
Cobalt	< 1 ppm	< 0.1 ppm
Copper	< 1 ppm	< 0.1 ppm
Iron	< 4 ppm	1.0 ppm
Lead	< 1 ppm	< 0.1 ppm
Magnesium	< 2 ppm	0.1 ppm
Manganese	< 1 ppm	< 0.1 ppm
Sodium	< 10 ppm	1.5 ppm
Sulfate	< 700 ppm	275 ppm
Zinc	< 1 ppm	< 0.1 ppm
Specific Gravity	1.545 -1.565 SG	1.550 SG

Shelf Life:

If stored at a temperature above 40°F and below 105°F in its original container, LNSF has a 5 year shelf life.

Packaging

5 gallon pails, 55 gallon drums and 275 gallon totes

Storage/Safety:

Store and handle as an acidic solution.