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Product Bulletin

Product Name: SS - ZINC PHOSPHATE NF-2
Product Code: 2508915
Revision Date: May 5, 2026

SS - ZINC PHOSPHATE NF-2

SS ZINC-NF-2 is a MODERATE TO FINE GRAIN, “LO-TEMP” zinc phosphate compound used for applying corrosion inhibiting and lube coatings to steel in immersion tanks. OPERATES AT 155 F. ULTRA LOW SLUDGING, UP TO 75% LESS!!!

SS ZINC-NF-2 is an immersion type product which provides coatings of 4-15 Mg/M2 (= 500-1,500 mg/ft2). Crystal size is 2-4 micron and tightly bonded at 5 microns or less. Applied over steel and coated with a corrosion inhibitor /wax.

SS ZINC-NF-2 provides a dark coating which resists up to 250 hours corrosion resistance in salt spray testing conditions. Premium quality performance. Free of EDTA type products. Meeting industry specifications.

Features & Benefits

Lo-temperature Processing:

1. Providing Significant Energy Heating Costs Savings.
2. Ultra Low Sludging for Lowest Cost & Downtime.
3. Extended Bath Life By 50%, Lowering Cost.
4. Resistance To Iron Related Problems. Up To 15 Points Iron
5. Provides Dark Dense Coatings.
6. Provides Improved Corrosion Resistance and Bonding.
7. Eliminates "excess" Heat Related Sludge on Coils.
8. Effectively Coats Resistant Alloys Lube Applications

Physical Data

pH	1
Product Type	Liquid
Spec. Gravity	1.635
lbs./gal.	13.64
Foam, 0 = Low, 9 = High	0
Shelf-Life Years	10 years
Freeze Information	Damaged by Freezing

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Typical Processing

1. Pre-clean, Alkaline #ls-150, 4-8% B.v, 8 Min., 170 Deg. F.
2. Rinse (or Alkaline Descaler #399 Lr) (as Required by Process Spec)
3. Optional: Acid Pickle, (hydrochloric Or Sulfuric) 8 Mi (For Rust)
4. Rinse, 5) Preferred Rinse
5. Ss Zinc-nf-2, 140-180 F., 4-15 Min, 16+ Points Acid (re 3-4%) Iron To 15.
6. Rinse, 8) Rinse
7. Oil Option: 10-20% By Volume #168, 125 Deg. F, 30-60 Sec. (or #260)
8. Dry To Touch “non-Oil Option” #2018,3-6%, 125 Deg F. 30-60 Sec.
9. Lubrication Option: Polymer, Loc-lube #5, 8 Oz./gal., 175 Deg. F, 4-10 Min.

Packaging

Container Type	Poly
Net Units	750
Tare Wt.	25
Gross Wt.	775
DOT_Name	UN 3264, Corrosive Liquid, Acidic, inorganic, N.O.S., (Phosphoric & Nitric Acids),8, PG II,
DOT Hazard	Corrosive
Tarriff ID	2835.29

Use Parameters

Concentration Range	¼-2% typically.
Temperature Range	75 - 150 deg. F.
Time Range	20 sec. – min.
Agitation	Spray or dip.

Waste Disposal

REMOVES FATS OILS AND GREASE. REMOVE METALS.

Holding Tank Materials of Construction

ACID RESISTANT, STAINLESS OR POLY

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Other Information

It is important that the OSHA DATA, "Material Safety Data Sheet" be carefully read and reviewed with the users of this product. OSHA data is required to be posted in the work area by law.

Testing, Operating & Trouble Shooting Data

Total Acid =v (11-12 Ros)

1.) Transfer 10 Mils to Test Bottle.
2.) Add 5-10 Drops of Indic. #1 (phenol) “color Will Be Clear
3.) Now Add Drop by Drop Test Sol. 10, Until Pink Color Stays.
4.) Number Of Mls Used=total Acid.
(to Raise Total Acid A 1%, Add = 4-5 Points)

Total Acid Range: 35-95 (based On Effective Total Acid)

Effective Total Acid (eta)
Eta = Total Acid Pts - (iron X 3.5) Target = 40-45 Pts of Eta

Free Acid =

Same As Above but Use Bromophenol Blue Indicator in Place of Ind. 1
(Color Will Change from Yellow to Blue.)
Total Acid Range: 5.335-95 (based On Effective Total Acid)
Acid Ratio: Ta/fa = 4.5 New Bath 9.0 Older Bath with Higher Iron

Iron Test=

1) Transfer 10 Mils to Test Bottle.
2) Add 20 Drops Of 50% Sulfuric Acid.
3) Now Add Drop by Drop Test Sol. 189 (pot. Perman .2n) Until Pink Color Stays
4) Number Of Mls Used = Points of Iron.

Clean Or Decant Bath to Lower Iron Level. Usually Iron Is Controlled Below 14 Points.
Total Acid Level Should Be Raised as Iron Points Go Up. See Effective Total Acid

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New Bath Make-up Procedures: (These Procedures Must Be Follow Closely or The Bath Will "salt-out Large Dusty Crystals and Rust.) Place A Barrel / Basket / Bundle of Parts in Cool Solution Prior To Heating the Tank, In Order To "seed" Iron into the Bath. This Stabilizes Th Phosphate Chemistry in The Bath. The Iron in Solution Acts as A Catalyst to Hold the Bath in Proper Balance.
Allow The Parts to Sit in Solution Until the Tank Reaches Operating Temperature. In Many Cases Scrap Steel Can Be Used or You Can Purchase Iron Salts Such as Ferrous Sulfate, Steel Wool or Other Sources of Iron for Seeding the Bath. Urea Has Been Used Also.

Various Specifications: The Subject Product Meets the Operating Specifications of Many of The Processes Listed: Gm6074m, Chrysler Ps7902, Ford M21p6, Gm4435m, Chrysler Ps80, Ford S-58 Dry, Gm6174m, Chrylser Ps1649, Ford S-32-46, Gm6074m, Chrysler Ps7902, For M21p6, Dana Shaes 196. (4-09)

Our People. Your Problem Solvers.

For more information on this process,
please call us at 203.756.5521 or email: techservice@hubbardhall.com

Hubbard-Hall holds certifications for **ISO 9001:2015**, Responsible Distribution, as accredited by the **ACD** (Alliance for Chemical Distributors) and as a **Women-Owned Small Business**, as well as maintaining an association with **Omni-Chem**[136].