

Better chemistry. Better business.

Hubbard Hall 563 South Leonard Street, Waterbury, CT 07608 • HubbardHall.com • 800-648-3412

NCS # Z-1, (Pre Dilute 1%)

RINSE PASSIVATOR SEALER. Z-1 is a non chrome final rinse passivation treatment for aluminum passivation, Iron, Zinc, Manganese phosphate treatment processes. Provides a material with ready to use ph stability minimizing ph shift due to over use. Superior performance for critical operations requiring maximum adhesion and corrosion resistance on all metals.

Z-1 provides a superior surface which is highly receptive to painting and coatings providing salt spray results equivalent to chrome. Provides enhanced bonding of all types of coatings.

Z-1 will provide improved bonding and corrosion resistance of applied coatings. Z-1 does not contain chrome or other heavy metals. Meets Mil Spec 16232-G Type Z, Class 4 when used with TCJ-100 Zinc Phosphate. 24 hours salt spray.

Features & Benefits

Easy to control. **Pre Diluted and pH adjusted READY TO USE**
 Non-Chromated.

Operates at a wide chemical use range.
 Excellent performance when used with a final deionized water rinse.

Passivates zinc, aluminum and iron coatings.
 Can be used in spray and immersion applications

Physical Data

Specific gravity	1.00
Product Type	Liquid 2752.2
PH	4.0
LBS/Gal	8.34
Foam, 0=Low 9=High	0
Shelf Life Years	10 Years
Freeze Information	Not Damaged by Freezing



Surface Cleaning



Metal Finishing



Wastewater Treatment

Better chemistry. Better business.

Hubbard Hall 563 South Leonard Street, Waterbury, CT 07608 • HubbardHall.com • 800-648-3412

Operating Conditions/Typical Processing

3 STAGE CLEAN & COAT PROCESS:

- 1) Clean and Phosphate in Bond Guard iron phosphate, Or Zinc Phos Micron.
- 2) Rinse
- 3) Z-1 treated rinse (D.I. water is superior or R.O.), .5 -1.5% by volume, ambient-120 deg. F., 25 seconds., PH 4.5 5.6
- 4) Rinse, Halo (optional)
- 5) Dry & To paint.

FOR 5 STAGE PROCESS ADD ALKALINE CLEANER 1022, 1033

May Also be used as a final seal rinse for Zinc Phosphate pretreatments.

16232-G Type Z, Class 4: 1/2%, pH 4.5, 140 deg.F with TCJ-100 zinc phos

Packaging

Container Type	POLY
Net Units	460
Tare Wt.	25 Lb
Gross Wt.	515
DOT_NAME	Not regulated by DOT
Tariff ID:	3402.90.10

Use Parameters

Concentration Range	.25-.5% by volume
Temperature Range	75-150 F.
Time Range	20 sec. min.
Agitation	Spray or dip

Waste Disposal

NEUTRALIZE

Holding Tank Materials of Construction:

ACID RESISTANT, STAINLESS OR POLY



Surface Cleaning



Metal Finishing



Wastewater Treatment

Better chemistry. Better business.

Hubbard Hall 563 South Leonard Street, Waterbury, CT 07608 • HubbardHall.com • 800-648-3412

Testing, Operating, & Trouble Shooting Data

Maintain Ph Of 4.5-5.6 As Final Seal

To Lower The Ph: Use Ncs Z-1

To Raise The Ph: Use : Ph Conditioner 4 , Ammonium Hydroxide,

Or Surfcon H-430 (Liquid Ammonium Bicarbonate) , Or Ammonium Bicarbonate.

Dropper Procedure: 3/14 (target 1/2 - 1 1/2 %)

- 1) Take A 10ml Sample (must Be Within Ph Range)
- 2) Add 3-5 Drops Of Phenol Indicator
- 3) Add Drop By Drop Of 0.1n Naoh Until A Permanent Pink Appears. (count The Drops)
- 4) The Number Of Drops Required Multiplied By A Factor Of .04 = % By Volume
Ex) 25 Drops = ~1.0% By Volume

Titration Procedure: 3-2014 (target 1/2 - 1 1/2 %)

- 1) Take A 25ml Sample (must Be Within Ph Range)
- 2) Add 3-5 Drops Of Phenol Indicator
- 3) Titrate With 0.1n Naoh Until A Permanent Pink Appears.
- 4) The Number Of Mls Required Multiplied By A Factor Of .4 = % By Volume
Example : 2.7 Mls X .4 = 1% By Volume

Coating Weight And Crystal Formation Procedures: (1-2018 / R O S)

Our Technical Service Lab Provides 500x Digital Photo Prints Of The Conversion Coating. Microscopes At 500x Show Complex Mixed Crystal Of Zirconium At Typically Less Than < 1-Micron In Size. It Is Known The Crystals Less Than < 1.0 Micron Are Providing The Active Sites For The Performance Of Corrosion Protection And Coating Adherence Of Paints And Other Top Coats. ***It Is Recognized That The Performance Of Zirconium Coatings On Metals Are Of Superior Performance.***

1) Technical Service Lab On Site Provides Digital Microscopic (500x) Evaluation Of The Coatings Is Typical And Provides Significant Quality Information To Confirm The Surface Conversion.

Important To Note:

1 Nanometer Is The Length Of 10 Carbon Atoms. That Is Tiny !!!!!

It Has Been Indicated: " The Length Your Thumb Nail Grows In 1 Second Is A Nanometer.

Alternate Methods Are:

S P M (Scanning Probe Microscopy)

S T M (Scanning Tunneling Microscopy) (Non Contact & Dynamic Contact) (Tapping & I R)



Surface Cleaning



Metal Finishing



Wastewater Treatment

Better chemistry. Better business.

Hubbard Hall 563 South Leonard Street, Waterbury, CT 07608 • HubbardHall.com • 800-648-3412

A F M (Atomic Force Microscopy) (First Used In 1989) & Most Popular Method For Measuring Nano.

S E M (Scanning Electro Microscopy) Used For Zinc, Iron And Manganese Phosphates Is Not Acceptable

To Research The Nano Size Crystals Of Zirconium.

Ref: P C I, Magazine October 2017

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.

WARRANTY: THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.

Our people. Your problem solvers.

For more information on this product, please call us at 1-800-648-3412 or techservice@hubbardhall.com



Surface Cleaning



Metal Finishing



Wastewater Treatment