K-TECH TOPCOAT SEALER

CHROMATED ZINC ELECTROPLATE - EXCEPTIONAL SEALER

- There will be no supplementary equipment needed as this is used as a final rinse and it provides remarkable oxidization protection.
- It operates at room temperature up to 140° F (60° C) with very low viscosity that generates thin coatings. This makes it appropriate for both barrel and rack procedures.
- With this topcoat, the parts developed in K-Tech Topcoat Sealer provides more than 100 hours of salt spray guard over a hexavalent blue chromate (less than 5% white corrosion).
- Withstands over 350 hours salt spray shield for high performance trivalent chromate (less than 5% white corrosion on both).

COMMON OPERATING INFORMATION

	RANGE	RECOMMENDED
SOLUTION MAKEUP	1% to 8% by volume	5% by volume
TEMPERATURE	60° F to 140° F (16° to 60° C)	As required for drying parts **** Do not go above 140° F ****
DIP TIME	5 to 25 seconds	15 seconds
pH	10.5 to 12.0	11.0

TITRATION METHOD

1. Take 25 ml of working K-Tech Topcoat Sealer solution.
2. Add 4 drops of phenolphthalein indicator.
3. Titrate with 0.1N Hydrochloric Acid solution to colorless endpoint.

FACTOR: **MLS. 0.1N HYDROCHLORIC ACID X 0.225 = % BY VOLUME OF K-TECH TOPCOAT SEALER**

DRAGOUT METHOD – BARREL & RACK

Barrel

1. By volume, the average barrel plating drag-out per day is 5%.
2. The final rinse container will drop by 25% by volume per day if the size of the plating container is five times bigger than the final rinse container.
3. Hence, 25% of the initial charge (or 2.5 gallon) must be supplemented each day along with water to maintain the overall volume at 200 gallons – {since optimum initial solution of K-Tech Topcoat Sealer is 5% by volume – equivalent of 10 gallons for a 200 gallons container}.

Rack

1. By volume, the average barrel plating drag-out per day is 1%.
2. The final rinse container will drop by 5% by volume per day if the size of the plating container is five times bigger than the final rinse container.
3. Hence, 5% of the initial charge (or 0.5 gallon) must be supplemented each day.

ASSESMENT OF K-TECH TOPCOAT SEALER

To establish accurate exposure of K-Tech Topcoat Sealer (5% by volume), the Lead Acetate Drop Test is performed. Preferably, from the same barrel or rack, draw a part before the process and a finished part.

- Set up 5% Lead Acetate solution and place one or two drops on the parts (both before and finished part) concurrently. Record the results.
- Under the drops, take note of the time period it takes for the parts to turn dark. (Finished part should turn dark with as much as twice the time to take the non-finished part to turn dark with the lead acetate).

- Typically, it takes regular blue chromate about 2-3 minutes to fail and 4-5 minutes for yellow chromate.
- However, with blue chromate + K-Tech Topcoat Sealer, it will take more than 6 minutes to fail where as it will take more than 8 minutes for yellow chromate + K-Tech Topcoat Sealer.
- The time to failure decreases as the deliberation of K-Tech Topcoat Sealer lessens.
- If the failure time is below the time period mentioned above, K-Tech Topcoat Sealer should be added to the dipping Container according to either the titration or drag-out method.

HELPFUL HINTS

- When measuring pH, ensure the usage of a calibrated pH meter with a 1.0 standard. Do note that in general, pH paper will give a reading of 0.5 units higher than the actual reading.

CURING OF K-TECH TOPCOAT SEALER FILM (PRIOR TO SALT SPRAY TEST)

Before the salt spray testing, K-Tech Topcoat Sealer film on plated parts should cure or age at ambient temperatures between 24 to 48 hours (for best corrosion protection).

STORAGE AND HANDLING

K-Tech Topcoat Sealer contains alkaline elements that are corrosive to eyes and skin. It is a necessity to use preventive care such as chemical goggles, solid rubber gloves, boots and aprons. In the event of accidental contact, flush with plenty of water immediately and remove contaminated apparels. As for eye contact, immediately flush fresh water for at least 15 minutes and contact the medical group instantly. Do not breathe the steam and mists.

Additional Information:

FREEZABILITY: If freezing is required, it should take place during the period of the storage or transportation. However, like most chemical products, it would be best to avoid freezing.

- If K-Tech Topcoat Sealer is frozen, before usage, do defrost the product to 70° to 75°F (21° to 24°C). The product should be mix thoroughly until precipitates are totally liquefied to its original form.

EQUIPMENT

Carbon/stainless steel, PVC or rubber lined steel, or polypropylene should be used for assembling the chromate tanks. Usage of the mild steel heating coils is suggested when using steam as the heating source. Conversely, usage of plain steel application heater would be recommended for electric heating source.
(Note: Quartz heater is not a recommended source).

NON-WARRANTY

Keane Chemical LLC believes that all the information listed on this sheet is complete, factual and precise. However, there will be no guarantee that the outcome acquired by the customer will be as listed in this sheet given that the ultimate process of usage will be fully utilized by the customer and out of our authority. Therefore, we will not claim any liability on the handling of this product by the customer in any case which may violate the patents of the third parties.