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Product Data Sheet:ELKN-M8630150402A

Anti-baking, anti-discoloring FastKoat® M8630 *Chrome-free sealer*

– for maximizing corrosion resistance of passivated zinc-plated metals

Characteristics:

1. Excellent corrosion resistance.
2. Excellent resistance to high-temperature baking.
3. Excellent resistance to discoloring
4. Chrome free, conforming to any environmental requirements.
5. Complying with any stringent VOC regulations.
6. Easy to use and causes no/minimal change of treated surfaces
7. Non-toxic, pollution free.
8. Economical, dilutable for different targets of corrosion resistance.

Introduction:

FastKoat® M8630 is an excellent aqueous sealer for zinc-plated substrates, to reinforce the corrosion resistance and acid rain resistance thereof. With nano-grade hybrid complexes in the solution and the weakly alkaline pH value, FastKoat® M8630 can be used safely, without causing any blurring on the treated surfaces, typically seen with acidic sealers.

High Temperature Resistance -

The zinc-plated substrates treated with FastKoat® M8630 have retained their excellent corrosion resistance, even after baking at 200 ℃ for 4~8 hours, the typical measures taken, e.g. for gluing or against hydrogen embrittlement. As a result, for high performance zinc-plated work pieces, FastKoat® M8630 is an ideal sealer against high temperature treatment, while processing repetition can be saved.

Discoloring Resistance -

Very often, for aesthetic or other reasons, zinc platers have tended to produce work pieces with outstanding sheens of different colors, by incorporating organic dyes in the passivation. However, these dyed pieces tend to discolor upon on-going wet process, causing appearance variation and rejects. On the other hand, zinc-plated work pieces treated with FastKoat® M8630 have shown consistently the durability against discoloring.

FastKoat® M8630 works efficiently and effectively on well-passivated galvanized

metal pieces with respect to the corrosion resistance. In practice, depending on the requirements of anti-corrosion, ***Fast***Koat® M8630 can be diluted readily with deionized water before applying onto metal surfaces. As an initial trial and error, it is recommended to dilute with DI water down to 1/10 or its original concentration, namely, ***Fast***Koat® M8630 : DI water = 1 : 9, by weight, to find out its result of salt spray test (ASTM B 117), against any target value, so that fine-tunings can be followed until the goal is achieved.

In general, the corrosion resistance of zinc-plated metals depends on the thickness of zinc or zinc alloy, as well as the chemical treatment thereafter. ***Fast***Koat® M8630 can be applied on passivated zinc-plated surfaces , by dipping, brushing, spraying or rollers in a conventional way, followed by forced-drying at 70 ~ 120 ˚C for 10 ~ 15 minutes, to achieve a satisfactory protective film. With applications conditions properly and closely monitored, ***Fast***Koat® M8630 can be an excellent synergizer with any performing passivating agent for the corrosion protection of zinc-plated metals.

In addition, ***Fast***Koat® M8630 is chrome-free, and contains extremely no hazardous chemicals nowadays seriously concerned in the environmental and health issues. Furthermore, there are only minimal volatile organic contents. Therefore, to meet the ever more stringent regulations, such as RoHS and VOC, etc., ***Fast***Koat® M8630 can be a reliable finishing agent for the zinc-plating industry.

Specifications:

Appearance::	Light amber translucent solution
Chemical Type:	Organo-inorganic complexed salts
Non-volatile，110 ℃ x 2 hour	18.0 ± 1.0 %
Sp. gravity，gm/ml，25 ℃:	1.05 ± 0.01
pH Value:	8.0 ± 1.0

Suggetions:

1. Preparation: Dilute ***Fast***Koat® M8630 readily with proper amount of deionized water at room temperature in a holding tank, preferably of plastic or stainless steel type.
2. In Use: Closely monitor and control the pH value of FastKoat® M8630 solution on-line in the range of 7~8, and its non-volatile within 10% of its initially prepared concentration. To avoid any potential contamination, the zinc-plated

metal pieces should be rinsed thoroughly before contact with the FastKoat® M8630 solution.

3. After Use: A daily filtration of the prepared ***Fast***Koat® M8630 after use is highly recommended, to remove any contaminated impurities. The holding tank containing the ***Fast***Koat® M8630 solutions has to be covered after use. The containers and tools in contact with the ***Fast***Koat® M8630 have to be cleaned with water immediately after use.

Packages:

20 kilograms in PE plastic pails or 200 kilograms in PE plastic drums。

Test Results:

FastKoat® M8630 – *Post-Baking Corrosion Test*

Purpose: Zinc-plated work pieces, treated with ***Fast***Koat® M8630 (Ten times dilution), are subject to a baking schedule of 200˚C for 4 hours, before salt spray test is run

Substrates: M10 X 25 Zinc-Plated Fasteners

To Observe: the time for the starts of white rusts and red rust

Duration: 1192 hours

Treatment Method:

1 - Treated with ***Fast***Koat® M8630 + baking
2 - Treated with ***Fast***Koat® M8630 twice (two coats) + baking
3 - Treated with ***Fast***Koat® M8630 + baking + ***Fast***Koat® M8630

Conclusions：

Treatment 1: No white rusts at 120 hours SST; No red rusts at 1192 hours SST

Treatment 2: No white rusts at 120 hours SST; No red rusts at 1192 hours SST

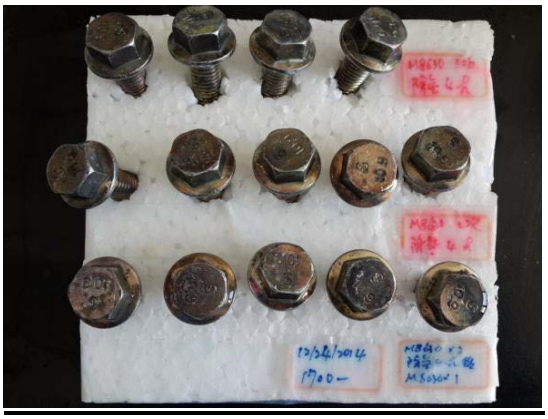
Treatment 3: No white rusts at 120 hours SST; No red rusts at 1192 hours SST

A single coat of ***Fast***Koat® M8630 serves the purpose.

Before salt spray test (SST)

No white rusts at 120 hours SST

No red rusts at 800 hours SST



No red rusts at 1192 hours SST