

# KEMP ZF2 (Two component)

## Inorganic ZincFlake Coating

KEMP ZF2 is a special solution of corrosion resistant coating effectively protecting the material from the corrosion through the strong galvanizing process as the water soluble, organic, heat drying and self curing type zinc paint (metallic silver) designed to protect the metal material for a long. Diverse coating types such as spray, dip, dip spin are applicable to the production line. This excellent water soluble inorganic coating material is used for the protection of metal and extends the life of STS, aluminum and hot dip galvanizing.

### Uses

This coating material is widely used for the protection of metal (including the casting), bolt & nut and aluminum surface.

This coating material is also used for the coating of metallic material requiring the strong corrosion resistance, repair of existing hot dip galvanizing and protection of STS.

### Excellent Features

1. Finished conditions: Matt and Metallic Silver
2. Drying time: 5~10 minutes are required for the tack-free dry |  
Dry at the temperature of 200°C for 20 minutes is required for the complete dry (Basic property and complete property are expected 1 day after the natural dry and 7 days later respectively).
3. Solid volume ratio: 34% ISO3233
4. Theoretical coating ratio: 34 ~ 17m<sup>2</sup>/kg at the condition of 10 ~ 20μm on the plane
5. Specific gravity: For mixture, about 1±0.02 ASTM D1475
6. Coating type: Spray, Dip, Dip spin
7. Initial manufacturing viscosity Zahn #3: 14 ~ 16 seconds  
Maximum usable viscosity: Within 25 seconds, 22 seconds and 30 seconds for the spray, dip and dip spin respectively.
8. Heat-resisting temperature: 400°C ~ 450°C
9. Storage period: 10 months from the date of manufacturing with sealed.

### Coating Specification

#### 1. Surface pretreatment

- : Completely remove the fraction on the surface of basic material through the solvent washing or heat washing.
- : Remove the rust and scale on the surface using either the Shot blast ball 0.3~0.5mm or Sand blast grit #80~120.
- : Immediately applicable to the chemical conversion coating (iron phosphate and zinc phosphate) material.

#### 2. Coating Conditions

- Temperature of 0°C ~ 35°C is suitable as the coating ambient temperature.
- Relative humidity is less than 85%.
- Temperature on the surface of basic material shall be 3°C higher than the dew point.

#### 3. Mixing

- : P/1 (BINDER) : P/2 (Zinc Flake) : P/3 (Aluminum Flake)  
= Weight ratio (1 : 0.27 : 0.03)
- Mix the coating material according to the indicated ratio.
- Agitate the P/1 solution after putting the P/3 and P/2 powders in the container so that the vortex is formed and then agitate the solution for more than 30 minutes so that the metallic powder may be spread without coagulation.
- \* If you filter the paint using the 100MESH Net, you may prevent the spray nozzle from being clogged by filtering the contaminated items and foreign substances.

#### 4. Pot time (For more information, see next page)

- : Usage time after mixing, within 48hr  
Usage time after mixing and sealing on room temp. within 72hr  
(5~10°C Refrigerated storage recommended)  
(When mixing old paint with new paint up to 3 days ago, the pot time will increase by 12 hours.)

※ Information of this technical data is obtained based on the theory and experience of our technical institute and is subject to change for the improvement of quality without prior notice

※ Check if the version of data to refer is the recently updated version before the use

#### 5. Dilution (Thinner: IPA, Ethanol)

:: Viscosity increasing dilution condition (Zahn # 3 Over 25 seconds)

- If viscosity increases during use, use 5 to 20% of diluent and use as soon as possible.
- If viscosity increases during use, new paint can be diluted 20 to 40% and used for 12 more hours.

#### 6. Coating Methods

: When coating with air spray gun, Nozzle diameter : 1.3 ~ 1.8mm,  
injecting pressure : 2kgf/cm<sup>2</sup> ~ 4kgf/cm<sup>2</sup> and injecting angle : 40 ~ 60°

: When coating with airless gun  
Nozzle diameter : 209, 211, 311, 411 (Switch TIP)  
Discharge pressure: 110 ~ 120 bar

\* Repeat coating thinly for the prevention of sagging phenomenon.

: During the Dip drain coating  
20~30 seconds and 30 seconds ~ 1 minute and 30 seconds are required as the deposition time and drain time respectively (differ according to the size of product)

\* Finish spray coating is required for the prevention of allowable thickness deviation.

\* Float the powder so that the uniform paint film condition may be maintained.

: During the Dip spin coating  
20~30 seconds and 30 seconds ~ 1 minute and 20 seconds and 30 seconds are required as the deposition time and drain time respectively.

Dewatering speed : 400~600RPM and 1000~1200RPM for the 1st coating and 2nd coating

Applied process : 1st coating → Air power dry for 15 minutes → 2nd coating → 200°C \* 20 minutes (2Coating 1Baking)

### Coating Process

1. Degreasing : Remove the fraction through the solvent washing or heat washing
2. Pretreatment : Shot blast or Sand blast treatment (remove the rust and scale)
3. Coating : Mix the paint according to the indicated ratio and then use the paint after the filtering process. (No Dust Coating)
4. Dry : Usable immediately after the hot air drying at the temperature of 200°C for 20 minutes (7 days are required for the natural dry)
5. Thickness of paint film : Thickness of 10 ~ 20μm is recommended as the thickness of dried paint film

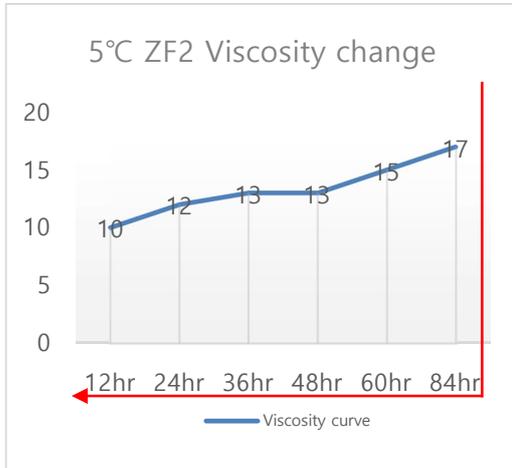
### Other Cautions

1. If you put the coated item in the solution of high temperature quickly after the coating of product, popping phenomenon may occur, so pay careful attention
2. Make sure to agitate the paint slowly so that the powder may not sink down.
3. Pay careful attention so that the coated area may not be contaminated by the dust during the coating process
4. Make sure to wash the spray gun after the use
5. If the coating material contacts your eyes, or when you inhale the coating material, it may cause the stimulation, so pay careful attention (for the details, refer to the MSDS)
6. Do the work under the smooth ventilation environment
7. Avoid the moisture and direct sunlight during the storage
8. For the other inquiries, contact us via an e-mail or over the phone.

ZF2 is an inorganic self-curing ceramic coating agent. The curing reaction proceeds slowly immediately after mixing of the Resin : Liquid, hardener: Zn flake. ZF2 coating time varies depending on the temperature, so please check the usage time according to the temperature of use and observe the working time.

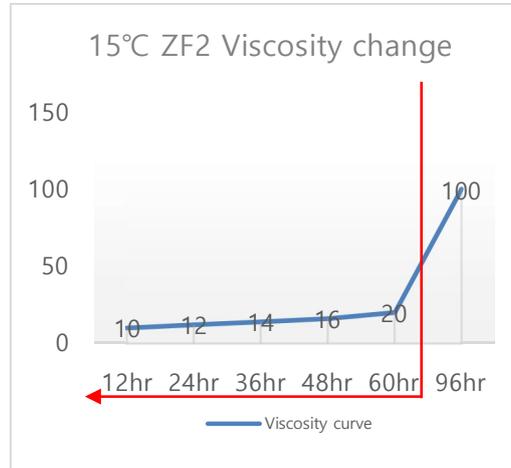
### Pot life information by temperature (Zahn #3)

5°C ZF2 Pot life



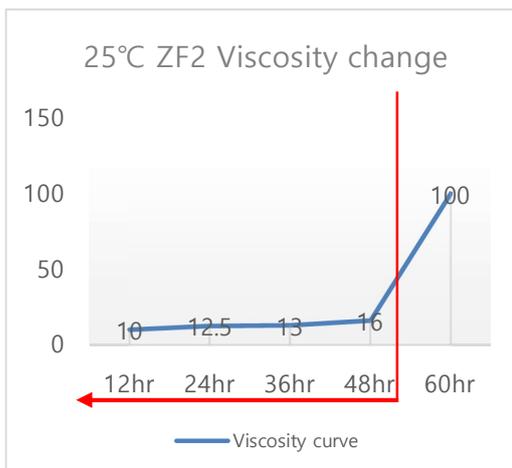
Please use within 84 hr in 5°C condition

15°C ZF2 pot life



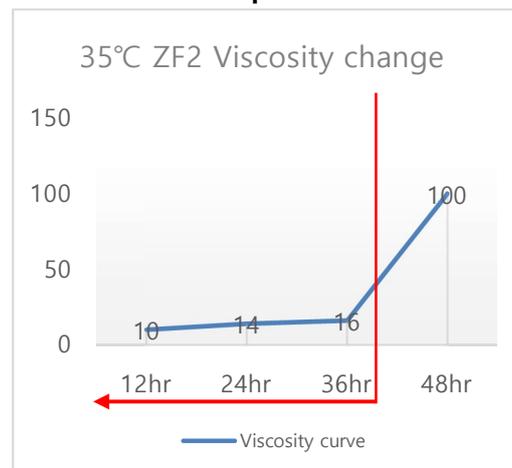
Please use within 60 hr in 15°C condition

25°C ZF2 Pot life



Please use within 48 hr in 25°C condition

35°C ZF2 pot life



Please use within 36 hr in 35°C condition

#### ● General ZF2 coating agent management tips

- Recommend Stir the ZF2 as needed amount. (ZF2 Initial stirring time 30min)
- During the process, stir the ZF2 at the lowest speed that does not allow powder precipitation.
- If you have spray problems during use or if the viscosity exceeds 25 seconds, dilute with 20-40% new paint of existing paint and use within 12 hours.
- Store remaining ZF2 at room temperature or below, avoiding moisture and direct sunlight.



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(recommend 5~10°C refrigerated storage)

#### ● Summer ZF2 coating agent management tips

- The ZF2 exhibits a characteristic that the pot life is shortened by the high temperature during the summer compared to the winter season..
- **For continuous production at the factory** : ZF2 coating agent supply tanks require products that can be top-sealed and externally cooled.
- **When used outdoors** : ZF2 should be used on the same day after mixing date.
- Remaining amount of ZF2 must be stored at 5~10 °C.