General Industrial Coatings

CC-E35

KEM AQUA® 8710 Water Reducible Enamel

Gloss Blending Clear	F78T552	Low Gloss Blending Clear	F78T555
Gloss Black	F78B550	Low Gloss Black	F78B553
Gloss Blending White	F78W551	Low Gloss Blending White	F78W554
Silver	F78S556	Custom Blend Series	F78FW

DESCRIPTION

KEM AQUA® 8710 Water Reducible Enamel is a 2.8 lb/gal VOC fast drying water reducible acrylic modified alkyd coating intended for industrial product finishing and refinishing applications. The versatility of application make it an ideal coating for a wide array of general metal applications.

Advantages:

- Fast air drying
- Good one coat protection - much better corrosion resistance than conventional latex coatings in OEM applications
- Good adhesion and early water resistance
- *Reduces with water
- Very good exterior color and gloss retention for alkyd resin technology
- Application by conventional, HVLP, electrostatic spray, and by dipping
- No critical recoat time
- Available in a broad range of colors and gloss ranges
- Use water to cleanup spray guns and equipment
- Good flexibility and mar resistance
- **Complies with 2.8 VOC solvent emissions.
- Free of chromate hazards.

* To ensure optimal coating performance and stability, it is recommended to use deionized water for reduction.

** VOC Compliance limits vary from state to state; please consult local Air Quality rules and regulations.

An Environmental Data Sheet is available from your local Sherwin-Williams facility or at www.PaintDocs.Com.

CHARACTERISTICS

High Gloss, 60° Gloss: 80+
Low Gloss, 60° Gloss: 2-10

Volume Solids: 30-36 ± 1 %
(varies by color)

Viscosity (at 77° F)**:**

Stormer	95-105 KU
Zahn	50-70 secs., #5 Zahn Cup
+Reduced	25-35 secs., #2 Zahn Cup

+(0-15% by volume with water)

Recommended Film Thickness:

Mils Wet (varies by color & with reduction)	2.8-4.8
Mils Dry	1.0-1.25

Spreading Rate: 420-560 ft.^{2}/gal. at 1.0 mil DFT (no application loss, varies by color)

Cure:

Air Dry or Force Dry	10 minutes flash 15-20 minutes at 150° F

Drying: (1.0 mil DFT at 77° F, 50% RH)

To Touch	20-30 minutes
Tack Free	65-75 minutes
To Handle	65-75 minutes
To Tape	65-75 minutes
To Recoat w/ itself	30 minutes

Note: Good air movement and humidity control is necessary for proper drying of water reducible coatings.

Flash Point: 142° F
(Pensky Martens Closed Cup)

Air Quality Data:
Non-photochemically Reactive Volatile Organic Compounds
2.8 lbs/gal, 336 g/L
(VOC, maximum, theoretical, as packaged, less water and exempt solvents)

Recommended Storage: Inside, sealed container, 35-95° F, freeze hazard.

Package Life:

Clear, Black & White	1 year, unopened
F78S556, Silver	6 months, unopened

SPECIFICATIONS

General: All substrates should be free of mold release, oil, grease, dirt, fingerprints, drawing compounds, surface passivation treatments and any other contaminants to ensure optimum adhesion and coating performance. Consult Metal Preparation brochure CC-T1 for additional details.

Aluminum: If untreated, prime with Kem Aqua Wash Primer, E61G522.

Galvanized Steel: Prime Kem Aqua Wash Primer, E61G522.

Steel or Iron: Remove rust, mill scale, and oxidation products. For best results, treat the surface with a proprietary surface chemical treatment of zinc or iron phosphate to improve corrosion protection. For additional protection, prime with Kem Aqua 70P Water Reducible Metal Primer, or for a solvent based, 3.5 VOC complying primer, use Kem-Flash® 500 Primer. For best results on exterior applications, a primer is recommended.

Testing: The information, data, and recommendations set forth in this Product Data Sheet are based upon test results believed to be reliable. However, due to the wide variety of substrates, substrate properties, surface preparation methods, equipment and tools, application methods, and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full scale application.

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APPLICATION

Typical Setups

Reduction: To ensure optimal coating performance and stability, it is recommended to use deionized water for reduction to a maximum of 15% by volume.

May be applied by: Conventional Spray
Electrostatic Spray
HVLP Spray
Dip Coating (Small Tanks Only)

Conventional Spray:

Air Pressure	45-50 psi
Fluid Pressure	15-20 psi
Tip	0.055-0.070 in.
Reducer	deionized water
Reduction Rate	as needed up to 10%

Electrostatic Spray:

Equipment must be isolated.
Contact your equipment supplier or your Sherwin-Williams representative for proper setup.

HVLP Spray:

Atomizing Air Pressure	8-10 psi at cap
Fluid Pressure	4-6 psi
Tip	0.055-0.070 in.
Reducer	deionized water
Reduction rate	as needed up to 15%

Dip Coating (Small Tanks Only)

Reducer	deionized water
Reduction Rate	as needed up to 15%

- A 3:1 blend of water and R6K25 (2-Butoxyethanol) is necessary for tank maintenance. Excessive agitation or turbulence on part immersion or withdrawal may cause foaming. Tanks must be monitored for viscosity, pH range of 8.5-8.9, and stability. Adjust pH daily using triethylamine. Do not use ammonia.
  Organic solvent addition will raise VOC.

Equipment/application guidelines are only guidelines and individual application & process parameters will dictate exact requirements.

Cleanup: Clean tools/equipment immediately after use with water when paint is wet. When dry, use R6K25 (2-Butoxyethanol) or MIBK.

Follow manufacturer's safety recommendations when using any solvent.

ADDITIONAL INFORMATION

1. Multiple passes to obtain film build are recommended rather than a single heavy pass.
2. Higher relative humidity will increase drying time.
3. Do not spray at temperatures below 50° F.
4. Indoor storage at 35-95° F is recommended. Protect from freezing.
5. For longer term exterior applications, priming with Kem Aqua 70P Water Reducible Metal Primer or Kem-Flash 500 Primer is strongly recommended. Priming gives increased corrosion protection and film integrity. Example of such application are construction equipment, farm equipment, machinery, and trailers.
6. Substrates such as pickled and oiled hot rolled steel give poorer adhesion and film integrity properties than clean, cold rolled steel. Proper cleaning to remove grease and oil is required for good performance. Use of Kem Aqua 70P Water Reducible Metal Primer or Kem-Flash 500 Primer significantly upgrades performance.
7. Do not over-reduce Kem Aqua 8710. Water reducible enamels must be applied at higher viscosities than solvent based enamels.
8. Water reducible coatings may cause corrosion in the presence of steel. Tanks, containers, piping and application equipment should be lined, stainless steel, or plastic.
9. Do not exceed 150° F force drying temperature as coatings (especially whites) may yellow at higher temperature.
10. A common property of water reducible alkyds, such as Kem Aqua 8710, is a rise in viscosity (up to 25%) over time. If this occurs, the product can be reduced with water to the desired application viscosity without any detrimental effects on performance. If viscosity increases in excess of 25%, contact your local Sherwin-Williams Representative for assistance.
11. Kem Aqua 8710 is a modified alkyd and alkyds can yellow over time. This should be considered when using this product or any other alkyd coating.
12. Do not use Kem Aqua 8710 over latex primers like Kem Aqua 50P Water Reducible Primer.
13. Kem Aqua Wash Primer, E61G522 and Kem Aqua 8710 system is not recommended for exterior service applications.
14. Kem Aqua Colorants maximum load is 8 ounces per gallon in F78T552 & F78T555 and 8 ounces per gallon in F78W551 & F78W554.
15. Gloss levels may be adjusted by using D64F505 Kem Aqua Flatting Base.
16. Refer to data page CC-S13 for details.
17. Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion and compatibility prior to full scale application.
18. If parts have been stored for longer than one week after priming, they must be scuffed or sanded before top coating to ensure removal of any accumulated dust/dirt.
19. On sandblasted surfaces, apply sufficient film thickness to fully protect the blast profile. This is typically 1 mil more than the blast profile.
20. Drying time is dependent on film thickness and atmospheric conditions. Heavier film thickness causes slow drying.

Performance Tests*

Substrate:	Untreated, cold rolled steel panels
Topcoat:	1.2 mils DFT
Salt Spray Resistance (ASTM B117)	100 hours
Humidity Resistance (ASTM D2247, 100° F, 100% RH)	100 hours
Freeze Thaw Resistance	Passes 4 cycles

*Performance test results may vary depending on dry film thickness, substrate tested and post-cure duration.

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION ONLY

Thoroughly review the product label and Safety Data Sheet (SDS) for safety information and cautions prior to using this product.

To obtain the most current version of the Environmental Data Sheet (EDS), Product Data Sheet (PDS), or Safety Data Sheet (SDS) please visit your local Sherwin-Williams facility or www.PaintDocs.Com.

Please direct any questions or comments to your local Sherwin-Williams facility.

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