KEM AQUA® 400 Waterborne Enamel

Black ......................... F75B550 Low Gloss Black........... F75B520
Gloss White .............. F75W551 Gloss Clear ............... F75V501
Allied Blue .................. F75L504 WM Green ............... F75G502
BFI Blue .................. F75LC500 Custom Blend .... F75WX Series

DESCRIPTION

KEM AQUA® 400 Waterborne Enamel is a high quality water reducible alkyd enamel. It offers very good color and gloss retention with sharp gloss, high DOI and excellent corrosion resistance making it an ideal coating for the Off-Road Equipment and General Metal markets.

Advantages:
- 2.8 lb/gal VOC* maximum
- Very good color and gloss retention
- Very good one coat protection; comparable to high quality solvent based alkys
- Excellent adhesion and early moisture resistance
- Sharp high gloss and high DOI
- Resistant to diesel fuel and motor oil
- Reduces with water**
- Application by conventional, airless, air assisted airless, HVLP and electrostatic spray methods and by dipping
- No critical recoat time
- Use water to cleanup equipment
- Good flexibility and mar resistance
- Dries hard overnight

CHARACTERISTICS

60° Gloss: 80+
20° Gloss: 10-20
Volume Solids: 25-32 ± 1% varies by color
Viscosity: 95-105 Krebs Units, Stormer (at 77° F) 40-60 secs., #5 Zahn Cup

Recommended Film Thickness:
Milis Wet 4.0-5.0
Milis Dry 1.00-1.25

Spreading Rate: 320-530 ft.²/gal. (no application loss) @ 1.00-1.25 mils DFT

Drying:
- (1.0 mil @ 77° F (25° C) / 50% RH)
- To Touch 35-45 minutes
- Tack Free 1.5-2.0 hours
- To Handle 2.5 hours
- To Recoat w/ Itself 30 minutes
- Force Dry 15-20 minutes @ 150-180° F (62-82° C)

Flash Point: 130° F (Pensky Martens Closed Cup)

Package Life: 18 months, unopened

Storage: Inside storage

pH: 8.2-8.6

Freeze Thaw: Passes 4 cycles

Air Quality Data:
- Non-photochemically reactive
- Volatile Organic Compounds (VOC) theoretical 2.8 lbs/gal (336 g/L) as packaged, maximum less water and exempt solvents
- Volatile Hazardous Air Pollutants (VHAPS) as packaged No reportable VHAPS

SPECIFICATIONS

General: Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties. Consult Metal Preparation Brochure CC-T1 for additional details.


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, and/or the application of Kem Aqua® 70P Water Reducible Metal Primer at 1.2 mil DFT. Kem-Flash® 500 Primer may be used where a solvent based 3.5 VOC primer is desired.

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.

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

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

An Environmental Data Sheet is available from your local Sherwin-Williams facility, or at www.paintdocs.com.
**APPLICATION**

**Typical Setups**

**Reduction:** Reduce with water as needed up to 10%. To ensure optimal coating performance and stability, it is recommended to use deionized water for reduction. Do not over reduce. Water reducible coatings must be applied at higher viscosities than solvent based coatings. For faster dry under humid conditions reduce up to 10% with Acetone, R6K9.

**May be applied by:**
- Conventional
- Airless
- Air Assisted Airless
- Electrostatic
- HVLP
- DIP

**Conventional Spray:**
- Air Pressure: 45-55 psi
- Fluid Pressure: 10-15 psi
- Tip: 0.055-0.070 in.

**Airless Spray:**
- Fluid Pressure: 2,100-2,400 psi
- Tip: 0.011-0.013 in.

**Air Assisted Airless Spray:**
- Air Assist Pressure: 20-30 psi
- Fluid Pressure: 1,800-2,500 psi
- Tip: 0.011-0.015 in.

**Electrostatic Spray:**
Can be applied by electrostatic, but equipment must be isolated. Contact your equipment supplier or Sherwin-Williams representative for proper setup.

**HVLP Spray:**
- Atomizing Air Pressure: 8-10 psi at cap
- Fluid Pressure: 8-10 psi
- Tip: 0.055-0.070 in.

**Dip:**
Excessive agitation or turbulence on part immersion or withdrawal may cause foaming. Tank must be monitored for viscosity and pH to maintain stability. Adjust pH daily to 8.2-8.6 with ammonia. Additions of organic solvents such as butyl cellosolve, R6K25, will raise VOC.

**Cleanup:**
Clean tools/equipment immediately after use with water when paint is still wet. When dry, use Butyl Cellosolve or MIBK. Follow manufacturer’s safety recommendations when using any solvent. Follow manufacturer’s safety recommendations when using any solvent.

**ADDITIONAL INFORMATION**

- Multiple passes to obtain film build are recommended rather than a single heavy pass.
- Higher relative humidity will increase drying time.
- Do not spray at temperatures below 45°F (7°C).
- Indoor storage at 35-95° F (2-35° C) is recommended. Protect from freezing.
- Do not use Kem Aqua® 400 Waterborne Enamels over latex primers like Kem Aqua® 50P Water Reducible Primer.
- Custom colors available by blending bases with Kem Aqua® Colorants.
- Proper pH is critical to achieve package stability.

**Performance Tests**
1.2 mils dry film on untreated cold rolled steel (Q Panel) and air dried for 14 days.

<table>
<thead>
<tr>
<th>Test</th>
<th>Duration</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt Spray Test</td>
<td>200 hours</td>
<td>No face rust</td>
</tr>
<tr>
<td>Humidity</td>
<td>150 hours</td>
<td>Pass, no blisters</td>
</tr>
<tr>
<td>Pencil Hardness</td>
<td>ASTM D2247</td>
<td>HB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100° F (38° F), 100% RH</td>
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**CAUTIONS**

**FOR INDUSTRIAL SHOP APPLICATION ONLY**

Thoroughly review 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.