



**SHERWIN
WILLIAMS.**

Chemical Coatings

CC-E15

KEM AQUA® 1400 Water Reducible Baking Enamel

Low Gloss Black F83B420
Gloss Blending White F83W492

Low Gloss Blending White ... F83W422
Low Gloss Clear F83V421

Gloss Black F83B490
Gloss Clear F83V491

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p>KEM AQUA® 1400 Water Reducible Baking Enamel is a waterborne alkyd-amino enamel designed for general metal finishing. It provides a hard, tough coating at 2.3 lb/gal VOC compliance without the hazards of flammable solvents.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • VOC of less than 2.3 lb/gal • Less than 1.0 lb/gal Volatile Organic Emissions • Excellent flow and leveling • Excellent flexibility and toughness • Reduces with water, means considerable cost savings in solvent • No flash point - reduced fire hazards - possible lower insurance rates • Water can be used for cleanup of equipment • Free of lead and chromate hazards • Lower odor, improved working conditions • Full color and lower gloss range available with intermix system and Kem Aqua Flattening Base D64F505 (consult Product Data Page CC-S13) • Ideal for use on a wide range of metal products for both interior and exterior application • Versatile - may be applied by conventional, HVLP, air-assisted airless, and electrostatic spray methods 	<p>Gloss: High gloss 85 units Low gloss 10-15 units</p> <p>Volume Solids: 30-36 ± 1% may vary by color</p> <p>Viscosity: 85-95 Krebs Units Reduced 10-15% with water 30-40 seconds #3 Zahn Cup</p> <p>Recommended film thickness: Mils Wet 2.5 - 3.0 Mils Dry 0.8 - 1.0</p> <p>Spreading Rate (no application loss) @ 1 mil dft: 480-575 sq ft/gal</p> <p>Baking Schedule: Flash off: 10-15 minutes then 10-15 minutes at 325°F</p> <p>Good air movement helps water evaporation during flash off.</p> <p>Flash Point: none, Seta Flash Closed Cup</p> <p>Package Life: 1 year, unopened</p> <p>Storage: Inside, protect from freezing</p> <p>pH: 7.8-8.7</p> <p>Air Quality Data: Non-photochemically reactive Volatile Organic Compounds (VOC) as packaged, maximum 2.3 lb/gal, 276 g/L Volatile Organic Emissions as packaged, maximum 1.0 lb/gal, 120 g/L</p> <p>An Air Quality Data Sheet is available from your local Sherwin-Williams facility.</p>	<p>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.</p> <p>Aluminum or Galvanized Steel: For best results, treat the surface with a proprietary chrome phosphate metal treatment, or prime with Kem Aqua Wash Primer, E61G520.</p> <p>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.</p> <p>Testing: 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.</p>

APPLICATION

Typical Setups

Water Reducible Enamels must be applied at higher viscosities than solvent based enamels. They do apply and atomize easily at higher viscosities.

Conventional Spray:

Air Pressure 30-60 psi
Fluid Pressure 4-10 psi
Reducer water
Reduction Rate .. as needed up to 15%
Reduce to 30-40 seconds #3 Zahn Cup, do not over-reduce.

Air Assisted Airless:

Air Pressure 30 psi
Fluid Pressure 600-2200 psi
Tip011"
Reduction Rate none

Electrostatic Spray:

Equipment must be isolated

Reduction Rate 10-15%
Reducer water
Reduce to 30-35 seconds #3 Zahn Cup, do not over-reduce.

For Turbo Bells (Ransburg RPM 5062-PC):

Fluid Pressure 8 psi
Fluid Tip 3/32"
Turbine Air 10-20 psi
Bell RPM 15-30,000
Voltage 90KV
Delivery Rate 160 cc/min

HVLP (Binks Mach I BBR Gun):

Air Pressure 65 psi
Fluid Pressure 4-8 psi
Cap/Tip 97P/92
Reducer water
Reduction Rate 10-15%
Reduce to 30-35 seconds #3 Zahn Cup, do not over-reduce.

Cleanup:

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

SPECIFICATIONS

Product Limitations:

- Avoid freezing. Indoor storage at temperatures between 35-95°F is recommended.
- Do not spray at temperatures below 50°F.
- Store in plastic or lined metal containers because it contains water.
- Due to wide variations in aluminum substrate and treatment, adhesion should be tested before use.
- Do not apply over 1.25 mils dry film thickness per coat because of potential solvent popping during the bake cycle.
- To ensure adequate cure, minimum bake is 10 minutes at 325°F or 20 minutes at 300°F. Longer bake and/or higher temperature may be needed depending on the mass of ware coated.
- Paint is recoatable with itself after baking provided the first coat is not over baked.
- Water reducible coatings may cause corrosion in the presence of steel. Tanks, containers, piping and application equipment should be lined, stainless steel, or plastic.
- Low Gloss Clear, F83V421 is not intended for use by itself.
- Product will not texture. Use Kem Aqua 1500T Waterborne Baking Enamel for texture bake finish.

Performance Tests

Substrate: Bonderite 1000 steel panels
Salt Spray Test
ASTM B117 100 hours
Humidity
ASTM D2247, 100°F, 100% RH .. 250 hours
Conical Mandrel
ASTM D633 passes 1/8" mandrel
Impact Resistance, Direct
ASTM D2794 120 in lb
Impact Resistance, Reverse
ASTM D2794 40 in lb
Pencil Hardness
ASTM D3363 HB-H
Crosshatch Adhesion Excellent
MEK, 100 double rubs slight burnish

CAUTIONS

Thoroughly review product label for safety and cautions prior to using this product. A Material Safety Data Sheet is available from your local Sherwin-Williams facility.

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

LABEL CAUTIONS

SEE CONTENTS STATEMENT LABEL.

VAPOR HARMFUL. Use only with adequate ventilation. Wear an appropriate properly fitted vapor/particulate respirator (NIOSH approved) during and after application, unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage.

FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately.

SPILL AND WASTE: Remove all sources of ignition. Ventilate and remove with inert absorbent. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.

Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Contains 2-Butoxyethanol which may cause blood damage.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.

FOR INDUSTRIAL USE ONLY.

SEE MATERIAL SAFETY DATA SHEET. 21241-051905.

Note: Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams Company cannot make any warranties as to the end result.