Ottopol KXO-68 Technical Data Sheet - Reference Number 300-202-68

PRODUCT SPECIFICATIONS

Description ---------- 100% Acrylic Emulsion	Appearance ---------- Translucent Emulsion
Solids ---------- 39.0 - 41.0%	Specific Gravity ---------- 1.0548
pH ---------- 4.5 – 5.5	Weight/Gallon ---------- 8.80
Viscosity ---------- 500 cps Max	Freeze Thaw Stability - Keep from Freezing
Flash Point ---------- Same as Water	Charge ---------- Positive Cationic
Glass Transition Temp. ---------- 7 Degrees C	Water/Alkali/Chemical Resistance ------- Yes

AMBIENT CURE

Inks and coatings made from Ottopol KXO-68 that are cured without elevated temperatures and only relying on room temperature curing will result in a dry film that has excellent water resistance in a few hours and has chemical and alkali resistance in less than 24 hours. Elevated temperature will accelerate the resistance properties.

ALKALI RESISTANCE

After a 24 hour ambient cure, the dry film will have alkali resistance to a 4% caustic solution, when soaked for 15 minutes at 110 degrees Fahrenheit.

SOLVENT RESISTANCE

After less than 24 hours ambient cure, films that are 1.75 mils wet thickness had over 20 rubs Isopropyl Alcohol resistance.

ADHESION TO SUBSTRATES

The positive charge allows inks and coatings to have exceptionally good adhesion to plastic films: Mylar, PVC, PET and polystyrene. Adhesion to foil and other metallic surfaces is excellent.

Ottopol KXO-68 Polymer's Attributes

✓ **Blocks Tannin Oils:** Tannin oils from wood, such as redwood, red cedar and other species are easily blocked with *Ottopol KXO-68*.

✓ **Blocks Stains on Drywall:** Hard to block washable markers are effortlessly blocked, as well as other types of markers including felt tip markers. Lipstick and Vaseline will also be blocked with this polymer.

✓ **Meets Visual Assessment for ASTM Standard D7514-14**; Evaluating Ink Stainblocking of Architectural Paint Systems.

✓ **Blocks Water Stains from Concrete Blocks in Basements:** Damp basements are a common problem, particularly here in the United States. *Ottopol KXO-68* forms a water proof barrier under these wet conditions, eliminating unsightly stains on basement walls.

✓ **Blocks Fungal Growth in Damp or Humid Environments:** High humidity environments cause the growth of mildew. The cationic nature of *Ottopol KXO-68* forms natural barrier of the growth of fungi.

✓ **Excellent Adhesion:** Ottopol KXO-68 and products made from this polymer display excellent adhesion to a variety of surfaces.

STARTING POINT FORMULA #600-258-3S

For DIY Primer with Stain-Blocking and Water-Proofing Characteristics

Part "A" Grind – 77% Solids Dispersion before component #7 for dilution

1)	Water	54.00	
2)	Ottosperse	3.00	Dispersing Aid from Gellner Industrial, LLC
3)	HCL (31.45%) Muriatic Acid	1.39	pH Adjustment from Brenntag
4)	BYK 022	1.25	Defoamer from BYK
5)	Micral 932	100.00	Filler from Huber
6)	Kronos TiO2 2310	100.00	TiO2 from Kronos
7)	Water	27.00	For Dilution

Procedure: Place component #1, #2 #3, and #4 in a mix tank with a high shear disperser. Under high shear add component #5, followed by component #6 slowly. Shear until desired grind is achieved on a grind gauge, 10-15 minutes. Add component #7 to dilute.

Part “B” Letdown

8)	Ottopol KXO-68	288.60	Cationic Acrylic Resin from Gellner Industrial, LLC
9)	BYK 022	1.25	Defoamer from BYK
10)	BYK 3450	1.32	Wetting Agent from BYK
11)	RHEOBYK – H6500VF	4.16	Rheology Modifier from BYK

Procedure: In a separate mix tank add components 8 through 10 under moderate agitation with a vortex. Allow to mix for at least 10 minutes. Add Part “A” Grind to Part “B” Letdown. Allow to mix for at least 10 minutes. Adjust viscosity with component 11.

Primer Specification:

1)	Solids	54 - 56%
2)	pH	4.50 – 5.50
3)	Viscosity	95 - 100 KU

Primer and Polymer Attributes: 1.75 mil wet film thickness

1) 3 Hour Ambient Cure followed by 24 Hour Water Submergent Test.
Substrate was an aluminum Q-Panel. After 3 hours curing at ambient temperature the panel was placed in water for 24 hours. There were no signs of blushing, blistering or delamination. Minimal softening was observed using the fingernail test, which quickly recovered in less than 5 minutes.

Primer and Polymer Attributes: 1.75 mil and 3 mil wet film thickness

.

2) 24 Hour Ambient Cure followed by 24 Hour Water Submergent Test
Substrate was aluminum Q-Panel. After 24 hours curing at ambient temperature the panel was placed in water for 24 hours. There were no signs of blushing, blistering or delamination. Minimal softening was observed using the fingernail test, which quickly recovered in less than 5 minutes.

Self-Healing Polymer

3) If the coating or primer is stressed beyond these guidelines and blisters, it becomes a self-healing coating recovering within a matter of minutes.