

ESSENTIAL R2635

HIGH PERFORMANCE METALLIC INK VEHICLE

Essential R2635 polymer is a n-MP (n-Methyl-2-Pyrrolidone)-free, modified polyurethane dispersion vehicle that provides brilliance, extended shelf stability and tarnish resistance to bronze and aluminum-based colorants. In addition, inks made with Essential R2635 polymer exhibit low foaming and excellent water, scuff and rub resistance. Essential R2635 polymer displays excellent adhesion to paper and various polyolefin films.

KEY BENEFITS

- Brilliance
- Extended shelf stability
- Tarnish resistance
- n-MP-free

TYPICAL PROPERTIES*

Appearance	Translucent Light Amber
pH.....	8.0
Solids, % by Weight	31.5
Solids, % by Volume	29.6
Viscosity, cP @ 25°C -	
Brookfield, LV2, 30rpm	100
Density, Lbs./Gal.....	8.70
Total VOC (Wt.%).....	13.7

*These values should not be interpreted as specifications.

DISCLAIMER: The information and recommendations contained herein are based on data believed to be correct. The information is offered solely for the customer's consideration, investigation and verification because of numerous factors beyond our control affecting the results of the use of products, Essential Industries, INC. makes no warranty of any kind, expressed or implied, including those of merchantability and fitness for a particular purpose, other than that the product conforms to its applicable current standard specification. The manufacturer's only obligation shall be to replace such quantity of the product proven to be defective.



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Starting Point Formulation

<u>Materials</u>	<u>Gold Ink #1</u>	<u>Gold Ink #2</u>	<u>Silver Ink</u>
Aquafoil® AX-9500 Rich ⁽¹⁾	40.0	-	-
Aquastab® 9000 PGE8B/80-20 Rich ⁽²⁾	-	40.0	-
Sil-O-Wet 651 PA ⁽³⁾	-	-	32.0
Disperbyk® 190 ⁽⁴⁾	2.5	-	-
Water	5.0	7.4	8.3
Essential R2635	51.9	52.4	59.5
Acrysol® RM 825 ⁽⁵⁾	0.4	0.1	0.1
Byk 019 ⁽⁶⁾	<u>0.2</u>	<u>0.1</u>	<u>0.1</u>
Total	100.00	100.00	100.00
Initial Viscosity, sec. #3 Zahn	30"	28"	30"
Pigment particle size, microns	9	9	8
pH	7.6	7.6	7.6



Gold Ink #2



Silver Ink

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Typical Dispersion Procedure

1. Pre-blend water, surfactant and pigment. Do not use excessive shear.
2. Add the polymer, thickener and defoamer while mixing.
3. Essential R2635 polymer is a low viscosity polymer that transfers and lays best when the final viscosity is at least 14 seconds on a #3 Zahn cup. Therefore if the metallic paste, powder or dispersion incorporated into Essential R2635 polymer does not raise the viscosity to at least that level, a thickener must be added to the system.

Supplier Information

Product

Essential R2635
Aquafoil® AX-9500 Rich
Aquistab® 9000 PGE8B/80-20 Rich
Sil-O-Wet 651 PA
Disperbyk® 190
Acrysol® RM 825*

Description

Polymer
Bronze Paste
Bronze Paste
Aluminum Paste
Wetting Agent
Thickener

Supplier

Essential Polymers
United States Bronze
New Brook International
Silberline
BYK Chemie
Rohm & Haas