



FORMULATION GUIDE

Description

PerformaSil® 100 Silicone Water-Based Elastomer is a 1K water-borne, self-crosslinking silicone rubber latex which can be used in the formulation of ambient-cure or bake coatings for a wide range of substrates such as masonry, concrete, glass, metals, wood, and fabrics.

PerformaSil® 100 SWBE cures to form an elastomeric film which exhibits outstanding weather, water and solvent resistance making it an excellent candidate for exterior coatings in harsh weather conditions.

It can be used alone, or as a co-binder with other resins to improve their UV resistance, flexibility, and water resistance. It is compatible with most water-borne resin types such as acrylics, PUD's, alkyds, etc.

PerformaSil® 100 SWBE contains silanol functionality which allows it to chemically react with organic resins that contain active hydroxyl groups to form silicone-organic copolymers. These copolymers exhibit improved weatherability, water resistance, and flexibility.



Considerations

Typical dosages of PerformaSil® 100 SWBE are between 10% and 40% when used as a co-binder in water-borne formulations to improve weatherability, flexibility, and water resistance.

As with any product, use of PerformaSil® 100 Silicone Water-Based Elastomer in a given application must be tested (Including but not limited to field testing) in advance by the user to determine suitability.

Typical Properties

Property	Value	Unit of Measure	Test Method
Appearance	White Liquid		
Specific Gravity	1.01		
pH	10 -12		
Viscosity	100 - 200	cPs	ASTM D2196
Non-Volatile Content	45 - 48	%	ASTM D2369
Volatile Organic Content (VOC)	<25	g/L	EPA Method 24
Tensile Strength	3.5	MPa	ASTM D412
	500	PSI	
Elongation	500	%	ASTM D412
Durometer	45	Shore A	ASTM D2240
Water Vapor Permeance	1120	Ng/(Pa•s•m2)	ASTM E96
	20	US Perm	
Water Vapor Transmission	5.8	g/(h•m2)	ASTM E96
Air Permeance	<0.001	L/(s•m2)	ASTM E2178
	<0.0002	cfm/ft2	75 Pa air pressure

The manner in which you use and the purpose to which you put and utilize ICD High Performance Coatings + Chemistries (ICD) products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond ICD's control. Therefore, it is imperative that you test ICD's products, technical assistance and information to determine your own satisfaction whether ICD's products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been conducted by ICD. Unless ICD otherwise agrees in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release ICD from all liability, in tort, contract or otherwise, incurred in connection with the use of ICD's products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind ICD. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

Ingedient	Weight %	Use	Instructions
Water	2.96		Add in order with good agitation
Aminomethylpropanol	0.09	pH Adjuster	
Solsperse™ W100	0.71	Dispersant	
Surfyno® 104E	0.02	Grind Aid	
Tego® Foamex 830	0.04	Defoamer	
Kronos® 2310	3.10	Pigment	
Albafil® PCC	3.99	Pigment	
Natrosol™ 250HBR	0.01	Rheology Modifier	Disperse to 7+ Hegman
<i>Letdown</i>			
PerformaSil® 100 SWBE	88.64	Binder	
Solthix™ A100	0.44	Rheology Modifier	Add slowly with good agitation
Total	100		

Formulation Parameters	
Solids (wt%)	48.1
Solids (vol%)	44.5
Calculated VOCs (g/L)	9.0
Weight/Gallon (lbs)	8.9
PVC (%)	5.0

Clear Sealer Formulation

100% Silicone

Ingedient	Weight %	Use	Instructions
Water	89.78		Add in order with good agitation
Natrosol™ 250HBR	0.15	Rheology Modifier	Proceed when completely dispersed
Aminomethylpropanol	0.10	pH Adjuster	
PerformaSil® 100 SWBE	9.98	Binder	
Total	100		

Formulation Parameters	
Solids (wt%)	4.8
Solids (vol%)	4.7
Calculated VOCs (g/L)	9.3
Weight/Gallon (lbs)	8.4

Semi-Elastomeric Masonry Coating

70% Acrylic / 30% Silicone Blend

Ingedient	Weight %	Use	Instructions
Water	11.97		Add in order with good agitation
Aminomethylpropanol	0.24	pH Control	
Solsperse™ W100	2.43	Dispersant	
Propylene Glycol	0.95	Cosolvent	
Surfyno® 104E	0.10	Grind Aid	
Tego® Foamex 830	0.19	Defoamer	
Kronos® 2310	9.55	Pigment	
Burgess Optiwhite™	9.55	Pigment	
Imsil® A-8	7.64	Pigment	
Vicron® 15-15	5.73	Pigment	
Texanol®	0.95	Cosolvent	
Acticide® MBS	0.19	Preservative	
Natrosol™ 250HBR	0.14	Rheology Modifier	Disperse to 6+ Hegman
<i>Letdown</i>			
Carboset® AE960	32.18	Binder	
PerformaSil® 100 SWBE	17.06	Binder	
Tego® Foamex 830	0.18	Defoamer	
Solthix™ A100	0.14	Rheology Modifier	Add slowly with good agitation
Aminomethylpropanol	0.25	pH Control	
Polyphase® AF1	0.56	Preservative	Add slowly with good agitation
Total	100		

Formulation Parameters	
Solids (wt%)	58.8
Solids (vol%)	47.3
Calculated VOCs (g/L)	48.5
Weight/Gallon (lbs)	10.7
PVC (%)	32.0



www.icdcoatings.com



CONNECT WITH US

TIM KRYTENBERG
R&D MANAGER
tim.kryteneberg@icdcoatings.com
360.546.2286

ABRAM SCURLOCK
PLANT MANAGER
ascurlock@icdcoatings.com
360.546.2286