



TECHNICAL BULLETIN

UNITED SIERRA

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THE USE OF BEAVERWHITE 325 IN INTERIOR AND EXTERIOR

FLAT LATEX PAINTS

The Technical Service Laboratories of UNITED SIERRA have evaluated one of our Montana Talcs, BEAVERWHITE 325 versus a 325 Mesh New York State Talc in exterior and interior flat latex paint formulations.

The results of that evaluation show BEAVERWHITE 325 to be equivalent to the New York Talc in both formulations.

The exterior latex formulation was based on a label analysis of a major paint producer's latex house paint. According to the label, the following information is shown:

Pigment by Weight	39%
Vehicle by Weight	61%
	<u>100%</u>

Composition of Pigment by Weight:

Titanium Dioxide	52%
Zinc Oxide	11%
Silicates (Talc)	37%
	<u>100%</u>

Composition of Vehicle by Weight:

*Latex	62%
Soya Alkyd Resin	8%
Water	30%
	<u>100%</u>

*Synthetic Latex, non-volatile	36%
Volatile Water	64%
	<u>100%</u>

PVC = Approx. 47%
Volume Solids = Approx. 33%

The results of the evaluation of BEAVERWHITE 325 versus 325 Mesh New York State Talc in this formulation follows:

	<u>Paint Made With BEAVERWHITE 325</u>		<u>Paint Made With 325 Mesh N. Y. State Talc</u>
Contrast Ratio: 1.5-Mil Bird	.95	(Equal)	.95
3.0-Mil Bird	.98	(Equal)	.98
Luminous Reflectance (Green Filter)	89%	(Equal)	89%
Yellowness Index	3.0%	(Equal)	2.9%
Sheen (85% Gloss)	4	(Equal)	4
K&N Film Porosity Test *	22%	(Sl. Better)	25%

*This is a test relatively new to the paint industry that gives a good indication of enamel hold-out, film porosity, and stain resistance.

The data shows BEAVERWHITE 325 to be comparable to New York State Talc in this formulation.

Similarly, BEAVERWHITE 325 was evaluated relative to 325 Mesh New York State Talc in the 62% PVC polyvinyl acetate copolymer interior latex flat wall paint formulation shown below:

	<u>A</u>	<u>B</u>
Water	450	450
Cellosize QP-4400	5.8	5.8
Tamol 731	12	12
Pluronic L-62	2	2
Nopco NDW	2	2
Ethylene Glycol	15	15
Troyson PMA-30	.3	.3
Titanox RA-50	200	200
BEAVERWHITE 325	200	---
Nyral 300	---	205
Imsil A-25	75	75
Polyvinyl Acetate Copolymer (55%)	210	210
Carbitol Acetate	10	10

The evaluation again proved BEAVERWHITE 325 to be comparable for all properties tested:

	Paint A BEAVERWHITE 325		Paint B 325 Mesh N. Y. State Talc
Contrast Ratio (3-Mil Bird)	.972	(Equal)	.972
Luminous Reflectance	88.9%	(Equal)	89.0%
Yellowness Index	3.6%	(Equal)	3.6%
Sheen (85% Gloss)	3	(Equal)	3
Burnish Resistance ¹ (Δ Sheen)	2	(Equal)	1
K&N Film Porosity Test	0.9%	(Equal)	0.9%
(Loss of Reflectance)			
Scrub Resistance ²	Equal to Control		Control

(1) Increase in sheen after 50 cycles on a Gardner Scrub machine using dry cheesecloth.

(2) Performed on a Gardner Scrub machine using wet cheesecloth and Ajax Cleanser.

As an added incentive for the cost-conscious paint formulator to use United Sierra's products, we also offer a lower brightness version of BEAVERWHITE 325 at considerable cost savings. This product is known as GLACIER 325. The use of GLACIER 325 in latex paints will slightly lower their reflectance and whiteness when compared to BEAVERWHITE 325, but the economic advantages it offers may outweigh the slight compromise of whiteness.

The following table compares the General Electric Brightness (GEB) of BEAVERWHITE 325, GLACIER 325, Nyltal 300 and Asbestine 325 with paint reflectance, yellowness index and whiteness index in a 30% PVC, 35% Volume Solids Acrylic Latex Formulation pigmented with 50/50 TiO₂/talc by volume:

	<u>GEB</u>	<u>Reflectance</u>	<u>Yellowness Index</u>	<u>Whiteness Index</u>
BEAVERWHITE 325	91	93.2%	1.2	88.8
GLACIER 325	83	92.1%	2.9	81.7
Nyltal 300	92	93.3%	1.6	87.7
Asbestine 325	91	92.5%	2.0	85.3

For many types of formulations GLACIER 325 would be suitable, especially in view of its price advantage over BEAVERWHITE 325.

Perhaps, you should be using BEAVERWHITE 325 or its low priced counterpart, GLACIER 325, in your latex paint formulations.

The data in this brochure are based upon actual experimental work and are believed to be reproducible. However, no guarantee is made that the results as shown will be obtained.