

# **NEVSTAIN**®

## Hybrid Liquid Resins for Wood Stains



## **NEVSTAIN®**

Combining the best of Neville's resin binder technology with bio-renewables

### Four Grades and Options Designed to Optimize Performance





NEVSTAIN® Hybrid Liquid Resins for Wood Stains

## **NEVSTAIN®** Typical Properties

Properties	Test Method	NEVSTAIN® 100	NEVSTAIN®101	NEVSTAIN <sup>®</sup> 200	NEVSTAIN® 201	
Gardner Color (Straight)	ASTM D1544	6.5	6	6.5	6.5	
Appearance	Visual	Clear/Pale Yellow	Clear/Pale Yellow	Clear/Pale Yellow	Clear/Pale Yellow	
Brookfield Viscosity@ 25oC cps	Brookfield ASTM Viscosity@ 2196 300		100	500	300	
Specific Gravity @ 25°C	ASTM D891	0.96	0.94	0.97	0.96	
Non-Volatile, Wt.%	ASTM D2369	99.2	93.2	99.4	99.1	

• Property values represent typical results only and are not to be considered specifications.

## Compatibility

NEVSTAIN <sup>®</sup> Resin Content (%)	NEVSTAIN 10 25	N <sup>®</sup> 100 50	NEVS 10	TAIN <sup>®</sup> 25	<sup>9</sup> 101 50	NEVS 10	TAIN <sup>®</sup> 25	<sup>©</sup> 200 50	NEVS 10	TAIN <sup>®</sup> 25	<b>201</b> 50
Oil alkyd, Long oil, air drying											
Oil alkyd, Medium oil, air drying											
Oil alkyd, Short oil, air drying											
Polyurethane											
Mineral oil											
Compatible Incompatible 120°F for 1 week											



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## **Performance Test**

Control 1	Control 2	F1	F2	F3	F4	F5
250g/L	100g/L	250g/L	250g/L	100g/L	100g/L	100g/L
				NEVSTAIN <sup>®</sup> 100	NEVSTAIN <sup>®</sup> 200	NEVSTAIN <sup>®</sup> 101
Alkyd &	Alkyd &	NEVSTAIN® 100	NEVSTAIN <sup>®</sup> 200	replace 50%	replace 50%	replace 50%
Solvent	Oxsol 100	replace Alkyd	replace Alkyd	Alkyd & 100%	Alkyd & 100%	Alkyd & 100%
				Oxsol 100	Oxsol 100	Oxsol 100

Alkyd: Soya bean oil alkyd, long oil, air drying

Colorant: Red Iron oxide

Other additives: Cobalt 6%, Calcium 6%, Zirconium 12%, MEKO

Substrate: Pressure treated Lumber



Viscosity (Zahn Cup #1)



Flexible formulating





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#### **Penetration (Simulation Test)**

- When using NEVSTAIN<sup>®</sup> resins to replace the alkyd, the penetration speed and depth were both improved.
- When compared with control formula 2 containing Oxsol<sup>®</sup> 100, F3-F5 low VOC formulas showed better penetration.



#### **Penetration (Cross-section)**

- The penetration of the stains was observed from the cross-section.
- ✤ As pigment's particle size is large, it can't go as deep as the solution.
- ✤ When using NEVSTAIN<sup>®</sup> resins to replace the alkyd (100% or 50%), the penetration was improved.
- The cross-section result was consistent with the simulation test result.





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#### Drying Time (Dry to Touch)

- ✤ NEVSTAIN<sup>®</sup> resins improved the drying (Phase I).
- NEVSTAIN<sup>®</sup> 200 (F4) showed obvious effect on accelerating the drying.



#### Water Resistance Test

- All the formulas with NEVSTAIN<sup>®</sup> resins improved the water resistance when compared with the control formulas.
- We believe this is attributed to better penetration and hydrophobic properties.





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## **NEVILLE CHEMICAL COMPANY**

Contact us for details on how we can assist you on your next product development!

Neville's Hydrocarbon Resins are used extensively in the formulation of industrial products. Neville offers a broad range of HCR Chemistry Families in a variety of grades. Neville is recognized as a reliable supplier of value added quality resins with a proven track record of customer satisfaction, service, technical support and partnering with both suppliers and customers for continuous product improvement.





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For more information, please visit www.nevchem.com

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