



NeoRad® R-3024 Introduction Accelerate the Line Speed with Waterbased UV Curable Polyurethane

Bob.Wade@Covestro.com

Mike.Jeffries@Covestro.com

**WOULDN'T IT BE NICE TO
HAVE A WATERBORNE
DRY AS FAST AS A
SOLVENTBORNE?**

Slow water releasing coatings **impact** manufacturing efficiency



“Manufactures of joinery and cabinetry are seeking improvements in factory efficiency.”

“Manufacturers want the ability to expand production on shorter production lines with less rework damage due to the coatings with slow water releasing properties. “



Coating attributes	End user benefits
Fast water release	Shorter/faster drying lines
Improved blocking resistance	Faster damage free packing and stacking
Improved coating stability	Simplifies supply chains/prevents waste
Improved coating properties	Better competitive positioning
Lower VOC	Improved carbon footprint /regulatory compliance
Low Viscosity	Better spray properties
Recyclability	Lower coating cost/waste and carbon footprint

An ideal waterbased UV curable PUD would be one having the drying characteristics of a solvent-based with the VOC of water

Ideal Product Concept

- ✓ Dry like a solvent-based
- ✓ Block like a solvent-based
- ✓ Stable like a solvent-based
- ✓ <100g/L VOC like a waterbased



Property	WB Current State	SB Current State
Chemical Resistance	Pass KCMA	Pass KCMA
Stability	4 wks. 40°C	6 wks. 50°C
Steel Wool Test	<10% gloss red.	<10% gloss red.
Water/Flash Bake (5 mils)	5-10 min	3-5 min
Block Resistance w/ Flash/Bake	8-10 min	4-6 min
VOC	200g/L	300 to 400 g/L



Waterbased NeoRad[®] R-3024 accelerates line speed by about **50-60%** while maintaining other key attributes

Property	WB Current State	NeoRad [®] R-3024
Chemical Resistance	Pass KCMA	Pass KCMA
Stability	4 wks. 40°C	6 wks. 50°C
Steel Wool Test	<10% gloss red.	6 - 9% gloss red.
Water/Flash Bake (5 mils)	5-10 min	3 min
Block Resistance w/ Flash/Bake	8-10 min	4 min
VOC	200g/L	<100g/L

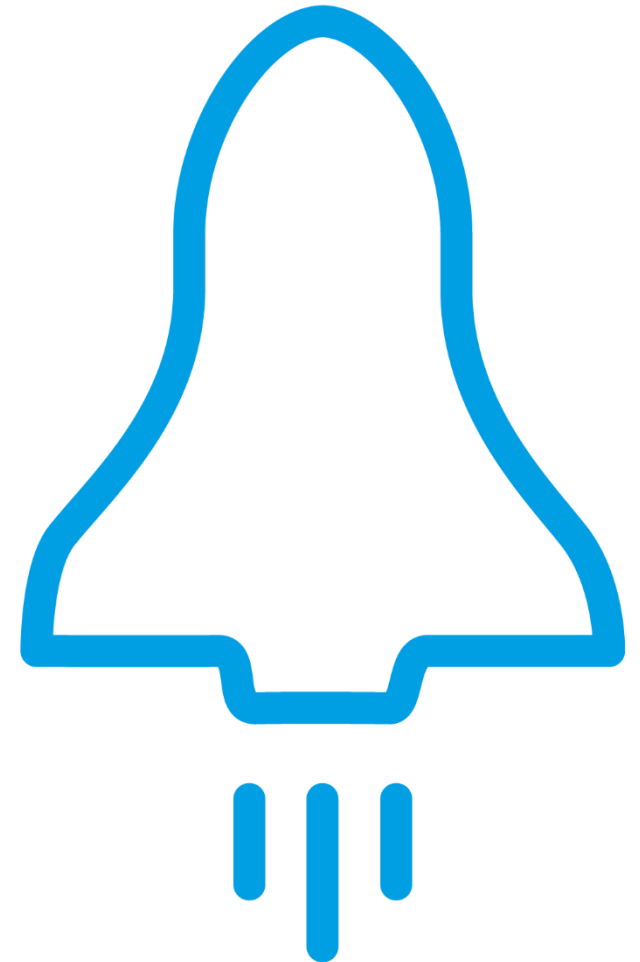
- ✓ Bake time reduced
- ✓ Shorter block resistance time
- ✓ Thicker application
- ✓ Lower VOC
- ✓ Lower carbon footprint
- ✓ Improved coating stability

50-60% Improvement!!



For applicators of waterbased UV curable coatings, **NeoRad® R-3024** offers a **50-60% improvement in line speed** while maintaining other key performance properties

- Shorter drying lines
- Increased application thickness – fewer coats required
- Faster damage free stacking and packing
- Energy saving due to reduced drying needs
- Allows for production expansion without major capital expenditures





NeoRad[®] R-3024 dries as fast as current solvent-based UV curable coatings with improved blocking resistance

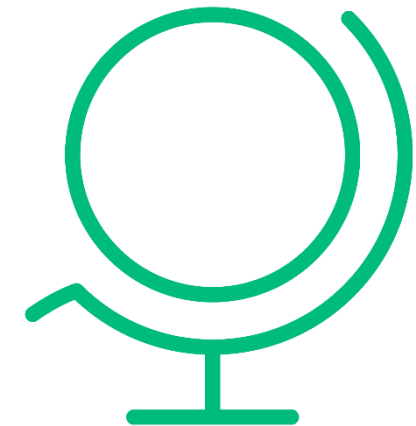
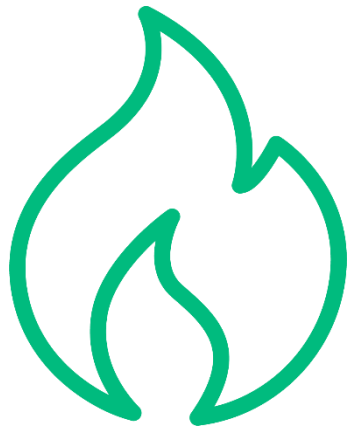
Property	SB Current State	NeoRad [®] R-3024
Chemical Resistance	Pass KCMA	Pass KCMA
Stability	6 wks. 50°C	6 wks. 50°C
Steel Wool Test	<10% gloss red.	6 - 9% gloss red.
Water/Flash Bake (5 mils)	3-5 min	3 min
Block Resistance w/ Flash/Bake	4-6 min	4 min
VOC	300 to 400 g/L	<100g/L

- ✓ Matched solvent-based bake time and stability
- ✓ Shorter block resistance time
- ✓ >3X less VOC
- ✓ Lower carbon footprint

Matched solvent-based drying speed at >3X less VOC

NeoRad® R-3024 can fit into processes where solvent-based UV curable coatings are used today

- Use current coating lines with minimal capital expenditure
- Increase film build per coat to improve efficiency
- Reduce time for stacking and packaging to improve efficiency and speed
- Energy savings, VOC reduction, cost savings, and reduced carbon footprint





**PARTNER WITH COVESTRO TO DEVELOP NEXT
GENERATION WB UV COATINGS
#NEXTGENMUSTHAVES**

LET US SEND YOU A SAMPLE WITH SIGNED NDA



THANK YOU

BOB.WADE@COVESTRO.COM

MIKE.JEFFRIES@COVESTRO.COM



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