



APTALON™ POLYAMIDE  
POLYURETHANE TECHNOLOGY

*Lubrizol*

Performance Coatings

[www.lubrizol.com/coatings](http://www.lubrizol.com/coatings)

# NOVEL TECHNOLOGY FOR HIGH PERFORMANCE WATER-BORNE COATINGS

As a market-leading innovator of coating technology, Lubrizol is dedicated to delivering performance, productivity and sustainability benefits to customers. Aptalon Polyamide Polyurethane Technology is no exception, as it delivers outstanding benefits in each area.

Aptalon™ Polyamide Polyurethane Technology is a revolutionary chemistry from Lubrizol that is solving water-based coating challenges with exciting new levels of performance and capability. With amazing versatility across a diverse range of surfaces and applications, this unique, adaptable technology enables water-based coatings to rival solvent-based performance for metal, wood and plastic substrates.

## Performance

- Very high levels of hardness and toughness means outstanding scratch and mar resistance with decreased frequency of recoating requirements
- Excellent thermal resistance enables use in applications where other polymers fall short
- Powerful chemical resistance brings long-lasting aesthetic appeal with remarkable resistance to staining

## Productivity

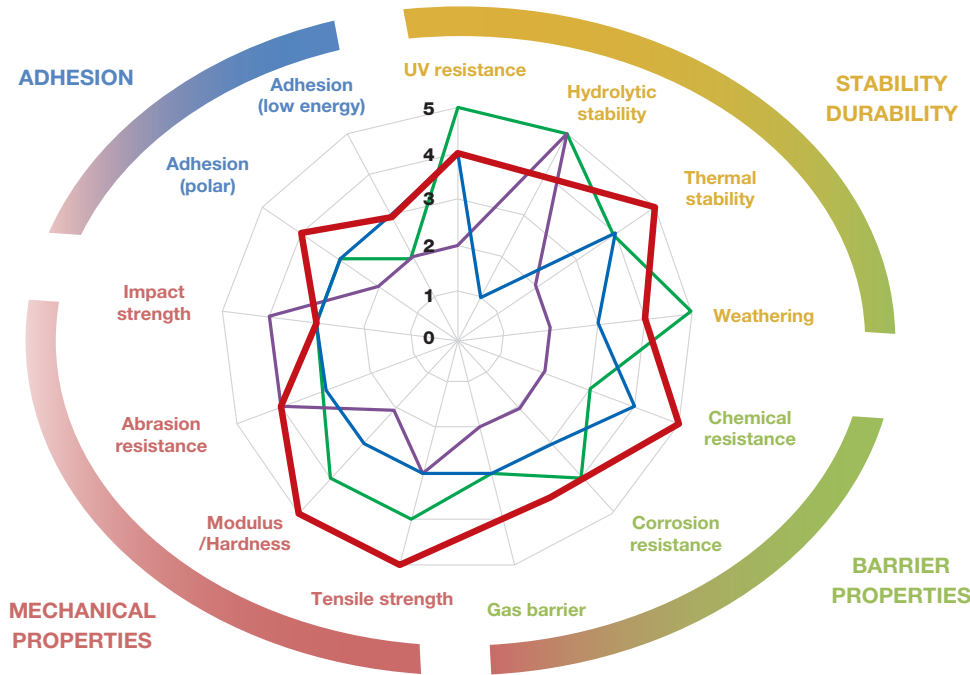
- 1K, self-crosslinking system (no mixing required, no chance of mixing errors)
- Easy to achieve various gloss levels without the need for matting additives
- Water-borne system means easy clean-up after application

## Sustainability

- High bio-based carbon content
- No potentially hazardous solvents needed to achieve outstanding water-borne performance
- Water-borne rather than a hydrocarbon-based solvent helps to reduce environmental footprint



Aptalon™ Polyamide Polyurethane Technology exhibits excellent performance characteristics and is adaptable to application needs in coatings.



**Aptalon™**

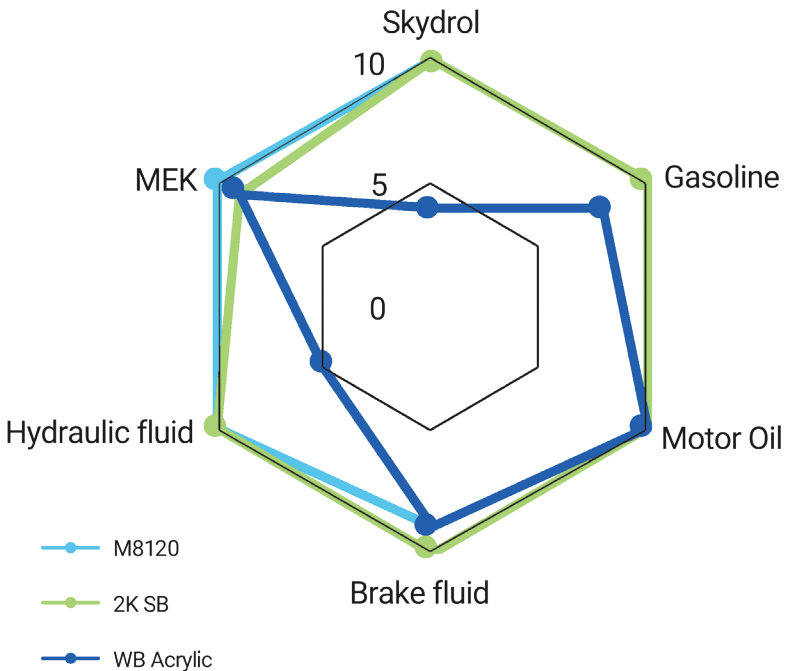
- Aptalon™ Polyamide Polyurethane Technology
- Polycarbonate Polyurethane
- Polyether Polyurethane
- Polyester Polyurethane





# APTALON™ M8120 FOR PIGMENTED METAL TOPCOAT

Aptalon™ M8120 is a bio-based polyamide polyurethane designed to deliver very high performance direct-to-metal and topcoats for paint and coating applications. Aptalon M8120 enables high performance one-pack, water-based industrial metal coatings with excellent weathering resistance, hardness and chemical resistance beyond other one-pack or two-pack polyurethane chemistries. It protects surfaces from abrasions and marring and works effectively to deter a broad range of aggressive industrial fluids to provide long-lasting appeal and protection.

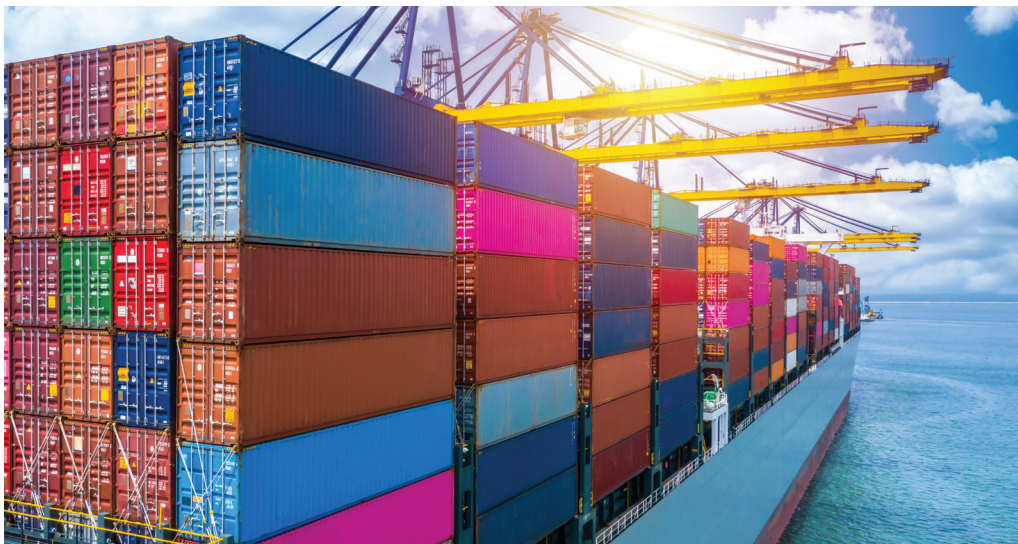




### APTALON™ M8120 PERFORMANCE: TOPCOAT ON PRIMER (METAL) – HUMIDITY CHAMBER

TOPCOAT*		250 h	500 h	750 h	1000 h	1500 h
2K Solvent-Based Polyurethane	% Blushing	10	10	10	10	10
	Field corrosion	10	10	10	10	10
	Blisters	10	8	8	6	4
Aptalon™ M8120 Water-Based Polyamide Polyurethane	% Blushing	10	10	10	10	10
	Field corrosion	10	10	10	10	10
	Blisters	10	10	10	8	8
2K Solvent-Based Alkyd / Epoxy	% Blushing	10	10	10	10	6
	Field corrosion	10	10	10	10	8
	Blisters	10	8	8	8	4

\*All topcoats were tested on the same epoxy primer





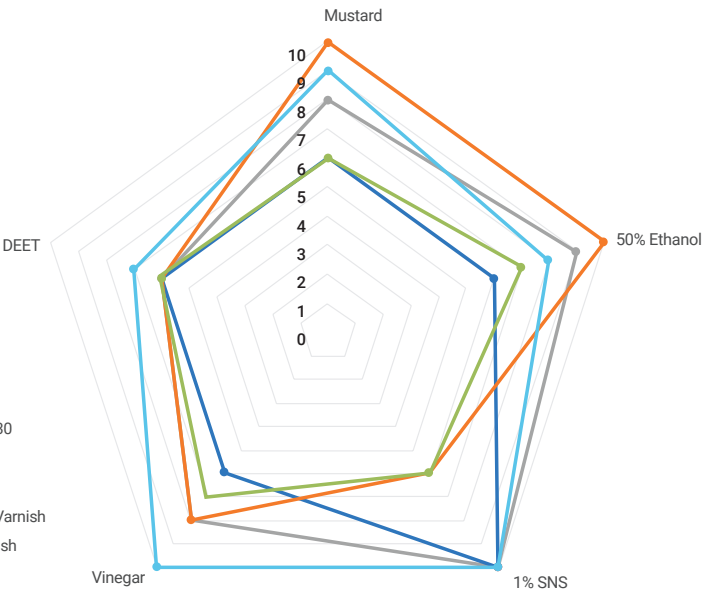
# APTALON™ W8030 FOR SELF-MATTING COATINGS

Aptalon™ W8030 Polyamide Polyurethane is a water-based, self-mattting polyurethane dispersion designed to eliminate the need for matting additives typically required in matte topcoats for wood and metal coatings. Coatings formulated with Aptalon™ W8030 demonstrate excellent hardness and abrasion resistance. It has an inherent low gloss that allows natural and matte finishes without sacrificing performance, and can be used with in pigmented or clear coatings.



## Chemical Resistance

ASTM D1308, 7 days ambient cure (10 designates highest score per chemical)



High performance, glossy PUD and Aptalon™ W8030 formula with no matting additives.

- Aptalon™ W8030
- WB Acrylic
- SB Varnish
- 2K Conversion Varnish
- SB Marine Varnish



# APTALON™ W8060 FOR HIGH GLOSS WOOD COATINGS

Aptalon™ W8060 is a bio-based polyamide polyurethane is designed for high-performance wood coating and flooring applications in a 1-component, water-borne system that matches the performance and protection of solvent-borne polyurethanes. Aptalon W8060 contains up to 35% bio-based carbon. The advanced resin delivers excellent hydrolysis resistance and chemical resistance that outperforms other water-borne polyurethane chemistries and hardness that meets or exceeds many 2-component water and solvent-borne products.

ASTM G171*	Normal Force	Avg. Scratch Width (um)	Scratch Hardness (Gpass)
Aptalon™ W8060	1N	90.4	0.312
Aptalon™ W8060/ TurboSet™ Ultra Eco Blend	1N	107.7	0.220
Commercial Water-Based 2K OMU	1N	108.4	0.217
Commercial Water-Based 2K PUD	1N	123.5	0.167
Commercial Water-Based 1K PUD	1N	136.0	0.138

\*Standard Test Method for Scratch Hardness of Materials using a Diamond Stylus.



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Lubrizol Performance Coatings is a market-driven innovator of specialty chemicals for coatings, inks and composites. Our portfolio of resin, binder, dispersant, wax additive and specialty additive technologies solves challenges across a wide range of markets and applications. Formulators choose Lubrizol to benefit from our innovative technologies, customer collaboration and global reliability. More than just a supplier, we are a valued partner with extensive experience in surface protection, dispersion, adhesion and barrier properties. We work closely with customers to enhance the performance, productivity and sustainability benefits of their products and drive new opportunities for market success.



## **Performance Coatings**

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