



# APTALON™ POLYAMIDE

POLYURETHANE TECHNOLOGY



*Lubrizol*

Performance  
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:

## 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

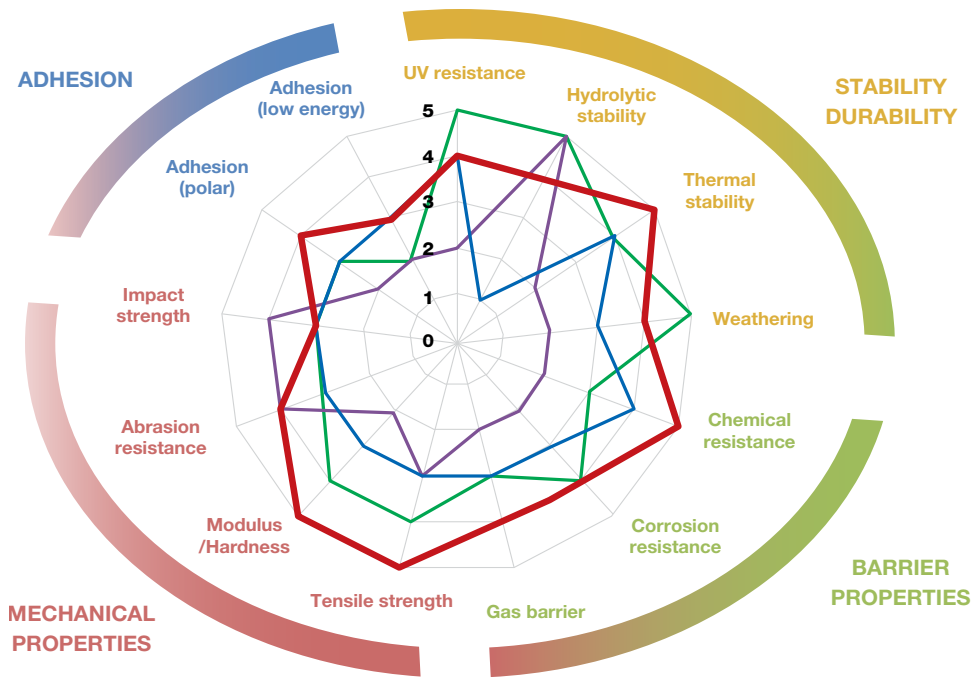
## Sustainability

- 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 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.



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



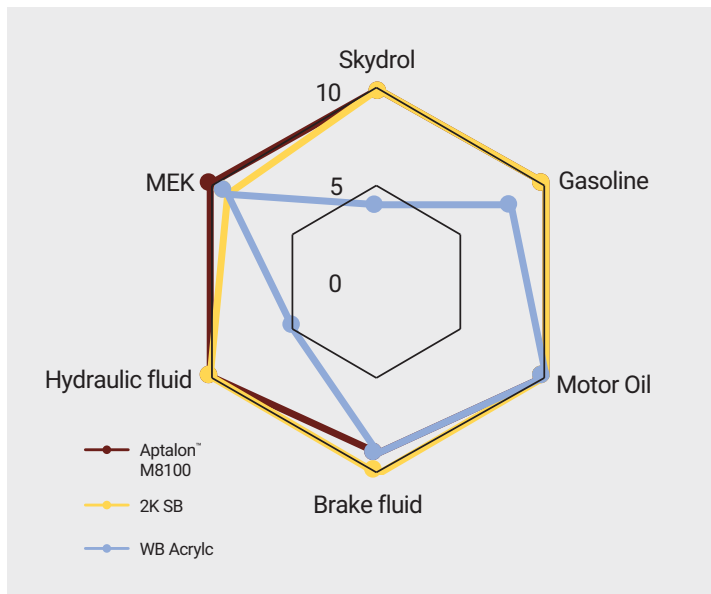
**Aptalon™**

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



# APTALON™ M8100 FOR PIGMENTED METAL TOPCOAT

Aptalon™ M8100 Polyamide Polyurethane is designed to deliver very high performance topcoats for paint and coating applications. Aptalon M8100 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™ M8100 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™ M8100 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

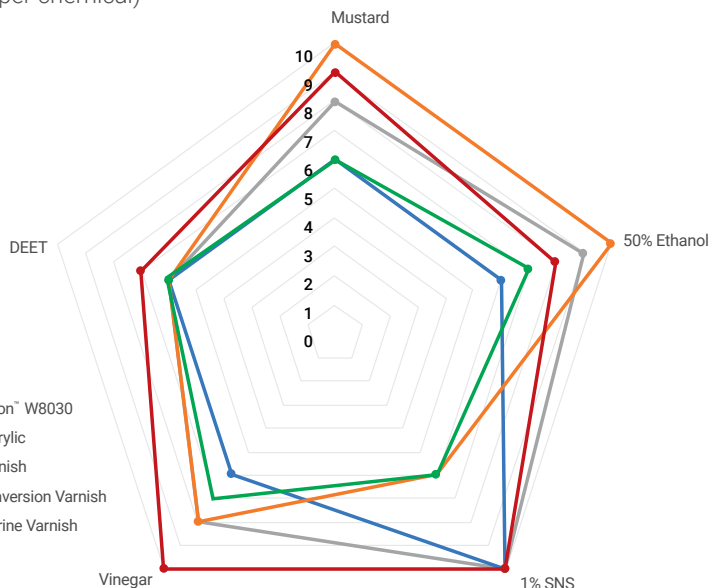


Aptalon™ W8030 Polyamide Polyurethane is a water-based, self-mattng polyurethane dispersion designed to eliminate the need for matting additives typically required in matte topcoats for wood and metal coatings. Coatings formulated with Aptalon™ W8030 demonstrate excellent hardness and abrasion resistance. 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)



Aptalon™ M8100 gloss formula 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 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™ W8062	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.

## APTALON™ W8062 FOR LOW VOC WOOD COATINGS

Aptalon™ W8062 Polyamide Polyurethane is intended for a wide array of coating applications, including high-performance sport and athletic wood floors or high traffic wood flooring applications as it exhibits excellent wear and gloss retention in one-pack water-based formulated coatings.

### APTALON™ W8062 PERFORMANCE: WOOD COATING (1K)

	Commercial Solvent 2K PU	Commercial Solvent 1K	Commercial Water-Borne 2K	Polyamide Urethane 1K
Gloss 60°	103	86	90	92
König Hardness (oscillations)	125	79	36	79
Black Heel Mark	7	9	9	8
Taber Abrasion (mg lost)	132	50	58	45
Chemical Resistance*	106/107	110/110	87/103	104/108

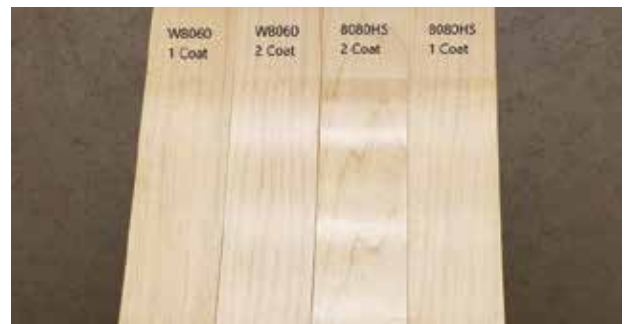
\*Sum of 13 Chemicals after 1 hour recovery



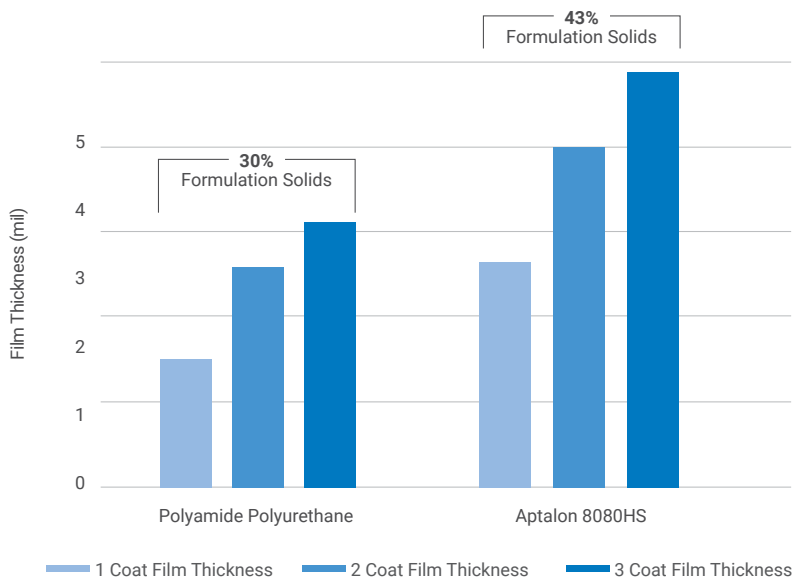


# APTALON™ W8080 HIGH SOLIDS FOR HARD SURFACE PROTECTION

Aptalon™ 8080HS Polyamide Polyurethane is a high solids, water-borne dispersion for hard surface protection. With 50% solids content, it formulates hard, tough durable films with high gloss, and maintains outstanding chemical and abrasion resistance. With fast dry times and 35% bio-based carbon content, Aptalon™ 8080HS is an advanced technology for protecting wood, concrete and metal surfaces.



Film Thickness Per Coat



\*Coated on concrete panels



Film build thickness of traditional three coat systems achieved in two coats with high solids.



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Lubrizol Performance Coatings is a market-driven innovator of specialty chemicals for advanced coatings, inks, and composites. Our portfolio of resin and additive technologies solve challenges across a wide range of markets and applications. Formulators choose Lubrizol to achieve unique performance, productivity, and sustainability benefits. More than just a supplier, we are a collaborator with extensive experience in surface protection, dispersion, adhesion, and barrier properties – working closely with customers to explore and develop truly differentiated solutions.



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