



Lubrizol

PERFORMANCE COATINGS

APTALON™ M8120

DIRECT-TO-METAL, WATER-BORNE, SELF-CROSSLINKING
POLYURETHANE DISPERSION

Aptalon™ M8120 is a water-borne, self-crosslinking polyurethane dispersion that offers both excellent adhesion to metal surfaces and outstanding topcoat properties in a single coat solution for protective and industrial applications. This resin uses patented polyamide polyol technology to deliver hardness and scratch resistance in water-borne coating systems.

True Direct-To-Metal Adhesion in a 1k Water-Borne PUD

Aptalon M8120 provides “5B” adhesion for coatings with outstanding performance in single coat systems. Typical polyurethane dispersions (PUD) do not adhere to metal, requiring the use of a primer. However, Aptalon M8120 enables DTM coatings with topcoat properties of a high performance PUD.

Exceptional Hardness and Abrasion Resistance

Coatings formulated with Aptalon M8120 deliver hardness and abrasion resistance that far exceed other water-borne DTM systems. With superior durability and protection that lasts, this resin has capabilities to unlock new applications for water-borne coatings.

Outstanding Corrosion Performance

This resin provides excellent all around endurance against ASTM B-117 salt spray testing conditions in direct-to-metal applications. When benchmarked against a variety of both 1k and 2k resin chemistries, Aptalon M8120 provides excellent corrosion resistance when measuring blistering, field rust and scribe creep. Coatings with Aptalon M8120 can protect metal substrates against harsh exterior environments.

Excellent Chemical Resistance

Aptalon M8120 compares favorably with key commercial benchmarks when evaluating resistance to aggressive industrial fluids. It is designed to deliver the durability needed for use in industrial environments.

WHAT WE ADD MAKES THE DIFFERENCE.™

- SUPERB ADHESION TO METAL SUBSTRATES
- FORMS A HARD, TOUGH FILM WITH OUTSTANDING ABRASION RESISTANCE
- EXCELLENT CORROSION RESISTANCE IN ASTM B-117 SALT SPRAY TESTING
- STRONG CHEMICAL RESISTANCE AGAINST AGGRESSIVE INDUSTRIAL FLUIDS
- GREAT RESISTANCE TO WEATHERING, MAINTAINS COLOR AND GLOSS IN XENON ARC ASTM 6695 CYCLE 6 TESTING
- DESIGNED FOR LIGHT AND MEDIUM-DUTY INDUSTRIAL APPLICATIONS
- SELF-CROSSLINKING
- NMP, NEP AND APEO-FREE*

*Ingredients not intentionally added during manufacture.

FEATURES & BENEFITS




- PROTECTIVE PROPERTIES OF A POLYURETHANE IN A SINGLE COAT, WATER-BORNE, DTM SYSTEM
- EXTRAORDINARY HARDNESS, ENABLING WATER-BORNE COATINGS TO BE USED IN NEW APPLICATIONS
- OUTSTANDING CORROSION AND CHEMICAL RESISTANCE FOR SUBSTRATE APPEARANCE AND PROTECTION
- AMBIENT CURE AND SELF-CROSSLINKING FOR EFFICIENT APPLICATION
- SUITABLE FOR USE IN HARSH EXTERIOR ENVIRONMENTS

Outstanding Combination of Durability and Adhesion

	Adhesion	Koenig Hardness	Pencil Hardness	Taber Abrasion Resistance (mg loss)	Impact – Direct (lbs/sq inch)
Aptalon™ M8120	5B	44	H	51	160
1k WB Acrylic	5B	7	6B	26	160
SB 2K Epoxy	5B	12	B	170	20
2K SB Polyurethane Over SB 2K Epoxy	5B	22	F	188	40

Substrate is cold rolled steel. DFT is 2.5 mils/64 µm DFT on for monocoat systems, two coat systems are 5 mils/127 µm. Cured for 7 days at room temperature. Testing protocols: Adhesion: ASTM D3359. Koenig Hardness: ASTM D4366-95. Pencil Hardness: ASTM D3363. Taber Abrasion Resistance: ASTM D4060, CS17, 1000 cycles, mg loss. Impact: ASTM D2794.

Corrosion Resistance Meets or Exceeds Competitive DTM Chemistries

Aptalon™ M8120	1K WB Acrylic #1	1K WB Acrylic #2	1K WB Acrylic #3	1K WB Acrylic #4
				

Application: 2.5 mil DFT on cold rolled steel. 7 day room temperature cure. ASTM B117 Salt Spray - 500 hrs.

Excellent Weathering Performance for Outdoor Applications

Hours	250	500	750	1000	1250	1500
Delta E	0.4	0.5	0.7	0.8	0.7	0.7
Gloss Retention	95%	95%	85%	90%	92%	83%

Application: Coatings applied at approximately 6 wet mils on CRS and allowed to dry for 1 week prior to exposure. Xenon Arc ASTM 6695 cycle 6.

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