

Aptalon™



APTALON™ REACTIVE
POLYAMIDE TECHNOLOGY

INTRODUCTION TO APTALON™ REACTIVE POLYAMIDE TECHNOLOGY

Aptalon™ reactive polyamide technology is a Lubrizol technology platform that can take products to higher levels of performance and capability. Aptalon technology delivers resistance to hydrolysis, chemicals, abrasion and heat. It can impart toughness, hardness, adhesion and durability to a diverse range of products. These polyamides can be utilized in water-based coatings, solvent-based coatings, powder coatings, urethane foams, adhesives and composites. With multiple functionalities, the technology can also be used to modify thermoset resins like epoxy or phenolics, as well as to make UV curable products.

Aptalon reactive polyamide technology is very adaptable. Lubrizol can engineer various functional end groups, such as hydroxyl, amine, carboxyl, and vinyl terminations. Lubrizol can provide customized molecular weights, control hardness, and build functionalities of 2, 3 or more. The potential applications for this exciting new polyol technology are only limited by the imagination.



Today, Lubrizol offers several polyamides, as listed in the table below. New reactive polyamide products will continue to emerge from this exciting platform. Please contact us to discuss your next product development challenge. We can customize Aptalon reactive polyamide technology to meet unique needs.



Reactive Polyamides	Applicable Systems		Possible Applications				Hydroxyl (+Amine) Number* mgKOH/g	Acid Number	Amine Number	Functionality	Molecular Weight	Tg, °C	Viscosity, cP	Renewable Carbon %	Comments
	Solvent-Borne	Water-Borne	Paints & Coatings	Adhesives & Sealants	Elastomers	Composites & Foams									
Aliphatic Polyamides															
Aptalon™ 9500	•	•	•	•	•	•	65	<2	<15	2	1700	-26	5000 @90C	76	Good All-Around Performance.
Aptalon™ 9501	•	•	•	•	•	•	50	<2	<15	2	2200	-24	6000 @90C	80	Good Flexibility With High Hydrophobicity.
Aptalon™ XPD 8500 LV**	•	•	•	•	•	•	86	<2	<15	2	1300	-26	5000 @90C	64	Lower Viscosity; Higher Hardness
Aptalon™ XPD 8502**	•	•	•	•	•	•	35	<2	<15	2	3200	-23	7000 @90C	83	Very High Flexibility.
Aptalon™ XPD 8511**	•	•	•	•	•	•	<2	<2	40	2	2800	-28	4000 @90C	77	Hydrophobic-Amine Terminated Version of Aptalon™ 9500.
Polyamide copolymers															
Aptalon™ XPD 1000x550**	•	•	•	•	•	•	75	<2	<15	2	1500	-50	6000 @90C	46	Soft Elastomeric.
Aptalon™ 9911	•	•	•	•	•	•	100	<2	<5	2	1100	-53	15000 @110C	0	High Hardness. Semi-Crystalline.

* Hydroxyl number determined by ASTM E 1899. ** Product in pilot stage; developmental samples are available.

FEATURES & BENEFITS

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



Durability
Very high levels of hardness and toughness means outstanding scratch, mar and abrasion resistance.



Temperature Resistance
Excellent thermal resistance extends the operating limits of products.



Chemical Resistance
Powerful chemical resistance brings long-lasting aesthetic appeal with remarkable resistance to staining.



Hydrolytic Resistance
The strength and hydrophobicity of the polyamide backbone provides outstanding protection against water.



NORTH AMERICA

Lubrizol Advanced Materials, Inc.
9911 Brecksville Road
Brecksville, OH 44141 USA
+ 888-234-2436

EUROPE

Lubrizol Limited
PO Box 42, Hexagon Tower
Blackley, Manchester
M9 8ZS United Kingdom
+44 161 721 6800

ASIA-PACIFIC

Lubrizol Specialty Chemicals
(Shanghai) Co., Ltd
10/F, Park Center International
No. 1088 Fang Dian Road
Shanghai 201204, PR China
+8621-3866-0366

SOUTH AMERICA

Lubrizol do Brasil Aditivos Ltda
Avenida Nove de Julho, 3653
Jardim Paulista
Sao Paulo – SP
01407-000
+55.11.4097.0250

The Lubrizol logo consists of the word "Lubrizol" in a bold, italicized, sans-serif font. A blue swoosh underline is positioned beneath the letters "u", "b", and "r".

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