The Andur Report

April 2020

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Anderson Development Company



Serving Customers in Unprecedented Times

Anderson Development Company is rapidly adapting to the current environment in the midst of the COVID-19 pandemic, along with most other companies in the world. Our production facilities remain open and operational, while many of our other folks are working from home and limiting direct social contact. We have modified work practices, increased social distancing, modified work schedules, and increased cleaning to ensure the safety of our most important assets – our people.

Urethanes are used in countless critical industries, whether food packaging and service, steel and aluminum industry, agricultural equipment, infrastructure, electronics, and many, many more. While most applications don't result in a urethane part on a store shelf, urethanes are clearly a critical part of people's lives and critical to the country. We at Anderson Development Company are here to serve you, your customers, and the country.

As we continue to navigate the rapidly changing landscape in our country, ADC is committed to working together with our customers to continue to solve problems and come up with creative solutions to urethane challenges. So, while seeing each other face to face may not occur for some time, don't hesitate to reach out to ADC for any urethane needs.

Stay safe this spring, we look forward to seeing you all again soon!

Urethane Business Director

New Product Line - Andur LV prepolymers

The R&D group has been busy developing new products in the lab. We are excited to introduce Andur® LV prepolymers, which are low free TDI prepolymers based on PTMEG, that are lower in viscosity than our standard LFTDI PTMEG products, especially at closer to temperatures ambient. This makes

them easier to dispense from the container with minimal heat. They also have increased clarity when cast with MBOCA, which enables processors to pigment parts and attain minimal color change as the elastomer cures. Below is a list of the new LV products.

Product	%NCO (nominal)	Hardness (nominal)	Viscosity (30°C), cP	Viscosity (70°C), cP	Potlife, min.	
LV 60 DPLF	7.25	60D	6000	470	5.5-6.5	
LV 65 DPLF	7.8	65D	6500	485	3.5-4.5	
LV 70 DPLF	8.4	70D	8000	500	3.5-4	
LV 75 DPLF	9.2	75D	9000	500	2-2.5	

Additional LQ Products Added

In the last Andur Report, Andur® LQ 9-5 APLF was introduced. We are now happy to introduce Andur® LQ 8 APLF, Andur® LQ 8-5 APLF, and Andur® 9 APLF as well. They are similar to the LQ 9-5 APLF in that they are liquid materials at room temper-

ature. Below are attributes and properties of our entire LQ line. Also, coming very soon will be a 70A version.

The LO series is a natural complement to our already comprehensive line of LFTDI polyester prepolymers. Due to their liquidity at room temperature, processors can take advantage of less heat history on containers of material which increases quality, lowers energy costs, and reduces scrap/waste.

LQ vs Standard										
LQ 8 APL	F 8 APLF	LQ 8-5 APLF	8-5 APLF	LQ 9 APLF	9 APLF	LQ 9-5 APLF	9-5 APLF			
Potlife, Mins 13-14	8-12	10	5.5 - 6	8 - 8.5	5.5	5-6	4-5			
Rebound, % 47 %	38 %	42 %	34 %	34 %	30 %	33 %	30 %			
Brittle Point, C -39 C	-27 C	-38 C	-24 C	-37 C	-25 C	-32 C	-20 C			
LQ Product: % NCO Range:		Nominal Hardness:		Viscosity @ 100 C:						
Andur LQ 8 APLF	2.6 -	2.6 - 3.0 %		80 A		1350 cP				
Andur LQ 8-5 APLF	3.2 -	3.2 - 3.6 %		85 A		750 cP				
Andur LQ 9 APLF	3.75	3.75 - 4.15 %		90 A		600 cP				
Andur LQ 9-5 APLF	5.4 -	5.4 - 5.8 %		95 A		400 cP				

ATTRIBUTES OF LQ POLYESTERS

- VISCOUS LIQUIDS AT ROOM TEMPERATURE
- AVAILABLE IN 80A, 85A, 90A, and 95A (70A COMING SOON!)
- APPROVABLE FOR FDA DRY FOOD APPLICAITON PER 21CFR 177.1680

ADVANTAGES OF LQ POLYESTERS

- ENERGY SAVINGS DUE TO SHORTER PREHEAT TIMES
 HIGHER TENSILE/TEAR STRENGTH
- LONGER POTLIFE
- HIGHER RESILIENCE
- LOWER BRITTLENESS TEMPERATURE

- GREAT OIL/SOLVENT RESISTANCE
- GOOD TENSILE/TEAR PROPERTIES

ADVANTAGES OF STANDARD POLYESTERS

- BETTER OIL/SOLVENT RESISTANCE
- LOWER VISCOSITY AT PROCESSING TEMPERATURES
- HIGHER MODULUS

ADC's Product Portfolio

ADC is a complete supplier for urethane systems. To the right is a recap of our product capabilities for Andur® prepolymers and Curene® curatives as well as some of the types of additives we offer.

With all of these tools at our disposal, we create many custom and unique formulations that provide the best solution for each application.

- Isocyanate capabilities
 - TDI
 - Low free TDI
 - MDI
 - H₆XDI
 - H₁₂MDI
 - TODI
 - IPDI
- Polyol capabilities
 - Polyester
 - Polycaprolactone
 - PTMEG
 - PPG
 - Polybutadiene

- Curatives/Polyols
 - Amines include MBOCA, MCDEA, DMTDA, DETDA
 - Glycols include 1,4 BDO, TMP, 1,4 BDO/ TMP, TIPA, TMP/TIPA, DEG
 - Polyols include PTMEG, PPG, polyester, and polycaprolactone
- Additives
 - Plasticizers, Abrasion additives, Catalysts

Anderson Development Company

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Mission Statement

Anderson Development will be a global supplier of innovative specialty chemical products, striving for continual improvement in all of our operations. It is our goal to be personal, efficient, and responsive to our customers and employees. We will provide a team-oriented atmosphere while allowing for individual diversity among our employees.

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