

The Andur Report

Anderson Development Company



August 2024

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- The Andur Report returns!
- New Faces at ADC
- PPDI Prepolymers
- Newest Products
- Poster and Paper Awards
- And More!

R&D Staff

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New Urethane Team Members Meet-n-Greet:

In the past year, ADC has brought in some additional sales reps with amazing urethane processing experience to add to our already well experienced team (Staff listing to the above).

Hershel (Hal) Erwin is our Urethane Business Director. Hal brings his 29 years of experience at ADC to the group with engineering, sales, and operations roles previously. Hal enjoys golfing and spending time with his wife Kelly and 6-year-old son Otto.

Kurt Moberly joined ADC last year and brings 32 years of urethane processing experience to the ADC team. Kurt has worked with several types of materials, MM&Ds, and molding techniques. He is married to his wife Charmaine, and they have 1 son.

Brad Strand more recently joined ADC. He has over 25 years of experience processing urethane with a variety of techniques and has a lot of expertise in processing MDI systems. Brad lives in Iowa with his wife Vicky and 2 children and enjoys water sports, hunting, and football.

On the technical side, there was an opening in the R&D group due to some internal promotions, which lead to Jeff DeVoy joining the R&D team in April 2024. Jeff has previous experience in rubber processing and testing, as well as some analytical lab experience. He is married to his wife Amy and has 2 daughters, and enjoys doing security at U of M football games.

New Product Line: PPDI Prepolymers

In the last year or so the technical group has developed some PPDI-based products which have excellent dynamic performance and abrasion resistance and could be used in applications such as amusement park wheels or other aggressive dynamic situations. Currently, two products are commercial with plans to have 2-3 more products by the end of the 2024. The two products are **AndurElite P-PE 95 AP** and **AndurElite P-CL 95 AP**, a 95A polyester, and an 95A polycaprolactone. Product specifications can be found below.

AndurElite P-PE 95 AP:

% NCO = 3.50 - 3.80%
Hardness: 93A - 96A

AndurElite P-CL 95 AP:

% NCO = 4.00 - 4.50%
Hardness: 92A - 96A

Recent Technical Paper & Technical Poster win awards

For the 2023 PMA, **Bryant Moore** submitted a technical poster entitled "Comparison of IPDI and H₁₂MDI Polyurethane Elastomer Systems" and took home the best poster honors. The poster compared and contrasted IPDI and H₁₂MDI materials regarding physical-mechanical properties, hydrolysis resistance, DMA, and thermal aging resistance. For more info or a pdf copy of the poster, please contact the technical team.

This past April at the 2024 PMA, **Robert Czeiszperger** presented a technical paper entitled "Short Postcures: When is It Okay and When Could It Get You Into Trouble". It was awarded best technical paper. This research looked at the effects of cure time as well as the effect of conditioning time after cure for a wide variety of TDI and MDI systems. Properties such as tensile/tear, abrasion resistance, compression set, and flex fatigue were investigated, just to name a few.

Congratulations to the technical team for both these awards!

On the Horizon: Bio-based Prepolymers

Coming soon to our urethane prepolymer product line will be some bio-based materials that have comparable properties to PTMEG products. In the last several years sustainability has been a hot topic in the chemical world. For the urethanes industry specifically, there have been many papers and discussions on this topic relating to bio-based raw materials, reduced energy processes, etc.



New D.A.D. Charts

In recent months, ADC has developed a number of new D.A.D. (dial-a-durometer) charts. They will be available on our mobile application soon, please inquire with R&D for a copy today.

Twenty-one charts of various TDI and MDI systems are already available.

- Andur MZ PT-13 / PTMEG 2000 / Curene 45
- Andur 75 DPLF / 80 APLF / MBOCA
- Andur 1-75 DP / 80 APLF / MBOCA
- Andur 70 APLF / 95 APLF / Curene 107

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.

www.andersondevelopment.com



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Recent New Products:

Recently developed by R&D in the last year or two.

Andur 9400 APLF

94A LFTDI-PPG with 20% lower rebound than 9500 APLF; could be useful in a dunnage application

Andur M 89 AP

Alternative to Andur M 90 AP (MDI-PTMEG) that builds green strength faster

Andur M 50 DP

50D MDI-PTMEG that is suitable for curing with 1,4 BDO (Curene 45) or with a blend of Curene 45 and polyol to yield a reduced hardness

Andur IP 70 AP

70A IPDI-PTMEG that is heat and UV resistant; an alternative to H₁₂MDI-based products

Andur IP 85 AP

85A IPDI-PTMEG that is heat and UV resistant; an alternative to H₁₂MDI-based products

Andur IP 90 AP

85A IPDI-PTMEG that is heat and UV resistant; an alternative to H₁₂MDI-based products

Andur IP 92 AP

92A IPDI-PTMEG that is heat and UV resistant; an alternative to H₁₂MDI-based products

Andur IP 95 AP

95A IPDI-PTMEG that is heat and UV resistant; an alternative to H₁₂MDI-based products

Andur IP 62 DP

62D IPDI-PTMEG that is heat and UV resistant; an alternative to H₁₂MDI-based products

Andur IP 70 DP

70D IPDI-PTMEG that is heat and UV resistant; an alternative to H₁₂MDI-based products

Curene 97

Amine blend curative suitable for curing IP products

New Equipment in R&D

Recently, R&D installed a compact meter, mix, and dispense machine. It is a two component machine that will give R&D the capability to run large customer trials in-house. Currently, we are getting it set up in our applications lab and should have it up and running in the next several months. It is a recirculating machine with heated and agitated tanks and a dynamic mix head, which will allow us to run a wide variety of systems and ratios.

R&D Capabilities

As a reminder, our R&D team is able to troubleshoot customer samples/issues with a fairly quick turnaround. We can run FTIR, %NCO, moisture content, XRF, various physical tests, etc, to investigate parts, prepolymers, curatives, etc. Samples/parts can be sent attention to Robert or Jordan.

Recent R&D/Sales Successes

- A customer recently tried BD 78 AP in an application with exposure to some harsh acids. It performed so well the end customer asked for a harder version for another part in the same environment. Andur XP- 819 was born. It is MDI-based polybutadiene prepolymer that yields a 95 Shore A when cured with butyl ethyl 1,3 pro-panediol (BEPD). Samples available upon request.
- A customer was having some molding challenges with a part made from an MDI-based system and with the help of our sales team and their wealth of MDI processing and molding experience, we were able to suggest some changes to the mold design and pouring technique to eliminate the molding issues and produce high quality parts.
- A customer asked for us to develop a material for a well known application with some specific property requirements. ADC was able to go from lab analysis, synthesis, and testing to a production batch and then to a successful trial at the customer in a matter of weeks not months.

Product data and information is readily available on our mobile app **ADC Urethane Systems**
[Download today!](#)

