



The Andur Report



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In this Issue

- TDS facelift & MCDEA data update
- Andur LQ 9-5 APLF
- Andur Glide LQ 25
- MBOCA Safety Poster

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Anderson Development Company

Newly updated TDS with new MCDEA data

In an effort to make our TDS more uniform, R&D has updated our Andur® TDS with some formatting changes that should make the text and numbers more readable. There were also a number of other enhancements made for clarity of information.

Besides formatting, the biggest change implemented was the addition of physical testing data for almost all products when cured

with Curene® MCDEA. Data was added for a more typical postcure of 16 hours at 212 °F (100 °C) and also for a higher temperature postcure of 4 hours at 320 °F (160 °C). The higher temperature postcure increases tear strength while at the same time lowering compression set. Hardness, tensile properties, and rebound remain relatively unaffected, though. Right

now only tensile data is listed, but compression-deflection data will be added soon as well.

At the top the TDS, we have also put the FDA status of each material (prepolymer only).

Below is a sample of what the new data looks like. As TDS are updated in our system, they will automatically update on our website and mobile app.

| Physical Properties – Tension (Values are in psi for Tensile, Modulus and pli for Tear) | | | | | | | | | |
|---|-----------------|------------------|--------------|--------------|-----------------------|-----------------|-----------------|-----------------------|--|
| Curative | Hardness, Shore | Ultimate Tensile | 100% Modulus | 300% Modulus | % Elongation at break | Young's Modulus | D624 Die C Tear | D1938/D470 Split Tear | |
| MBOCA | 89-92A | 7850 | 1100 | 2500 | 420 | 6600 | 545 | 210/137 | |
| MCDEA | 53D | 8200 | 2000 | 3350 | 430 | 12000 | 650 | 175 | |
| MCDEA (HT*) | 50D | 8650 | 1800 | 2450 | 550 | 12000 | 735 | 370 | |
| Curene® 107 | 86A | 6400 | 670 | 1700 | 480 | | 330 | 230 | |

New Product: Andur® LQ 9-5 APLF

Andur® LQ 9-5 APLF is a low free TDI polyester prepolymer. It is labeled as LQ to denote its liquidity at room temperature, as opposed to being a waxy solid at room temperature as our other LFTDI polyesters are. This means when initially heating the LQ 9-5 APLF, the material becomes flowable much faster, cutting time off from the preheat stage. The viscosity of the LQ 9-5 APLF is about 39000 cP at 86 °F (30C°), and quickly drops to 6000 cP at 122 °F (50 °C). At processing temperatures, the prepolymer is well below 2000 cP and has a 5-6 minute potlife with Curene® 442 (MBOCA).

The Andur® LQ 9-5 APLF is also approvable for dry food contact per regulation 21CFR 177.1680.

LQ = LIQUID



<https://www.thoughtco.com/definition-of-liquid-604558>

New Product: Andur® Glide LQ 25

As a result of the research and testing for the technical paper ADC presented at PMA and CPI this year, we have a new Andur® Glide product to introduce.

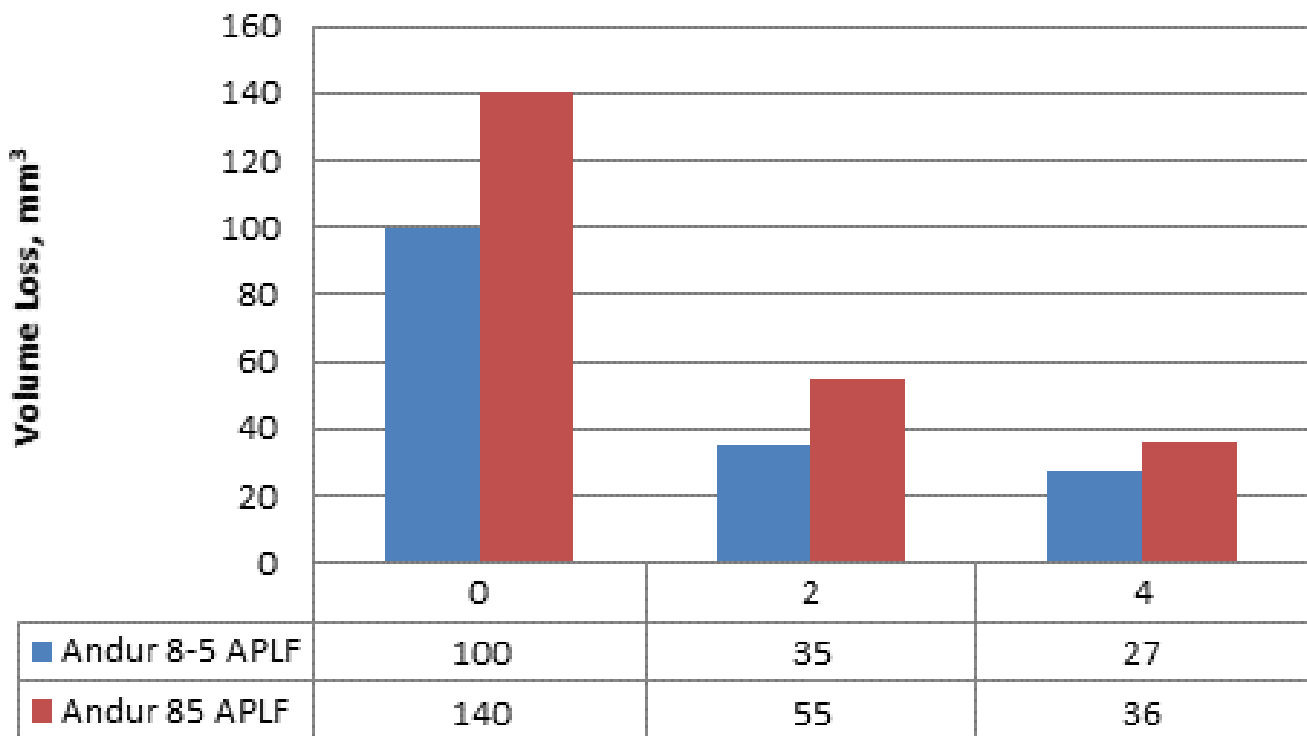
The product is called Andur® Glide LQ 25 and is named as such due to its active ingredient content of 25% as well as its liquidity at ambient temperature. The Andur® Glide LQ 25 is

an abrasion resistance additive consisting of a proprietary modified wax dispersed in a universal plasticizer. This makes it compatible in all urethane systems. The polymer doesn't settle out of the plasticizer to create two phases, which is an advantage to processors using this in an MM&D machine that doesn't have agitation in the additive tank. Also, when pre-mixed

with the prepolymer, no agglomerations or other undesirable mixing phenomenon occur. Below is a graph that shows the abrasion resistance benefit of using the Andur® Glide LQ 25 in Andur® 8-5 APLF and Andur® 85 APLF at levels of 2% and 4%. The data demonstrates that from 0% to 2% the volume loss (ASTM 5963, rotary drum abrasion) is substan-

tially reduced to about one-third of the control and at 4% there is another reduction of 25-35% from the 2% addition level. This translates to better sliding abrasion resistance in the final part. Then Andur® Glide LQ 25 is available in 5 gallon pails and 1 gallon cans, Quart samples (~2 lbs.) of the Andur® Glide LQ 25 are available upon request.

Volume Loss vs. % Andur Glide LQ 25




MBOCA Safety Poster


The Polyurethane Manufacturer's Association recently released a MBOCA safety poster for cast urethane processors who make parts with MBOCA. It details the proper PPE and handling techniques when working with MBOCA as well as some emergency procedures and ventilation recommendations. To the right is a sample of the poster. A downloadable PDF and full size (23"x29") printed version on waterproof paper are available (order printed version by 12/31/19) from the PMA for non-members at a cost of \$20 each (PDF is free). See the URL below for details.

<http://www.pmahome.org/main/resources-and-publications/health-safety-and-environment-resources/moca-safety-poster/>


Working with MBOCA




Using Personal Protective Equipment (PPE) can help keep you safe




Wear chemically resistant gloves and, if handling hot items, wear thermally resistant gloves over the chemically resistant ones.



Wear safety glasses.




For open systems, wear long sleeved shirts and long pants.




Good Workplace Ventilation

MBOCA is used to cure polyurethane resins which contain isocyanates. Therefore exposure to MBOCA and isocyanates must be adequately controlled through engineering/work practice controls (such as ventilation) or by the use of respiratory protection.


- Make sure the ventilation system is on and working.
- Place the source of vapors as near as possible to the hood.
- Do not bend over into the vapor flow zone.
- Do not use a comfort fan that is blowing near the vapor source. It may disrupt the flow and cause exposures.



Good



Bad



Safety currents may pull vapors back towards operator

Good Housekeeping/Hygiene

- Keep work areas clean.
- Spills should be cleaned and decontaminated.
- Decontaminate tools after use.
- Remove PPE carefully.
- No eating, drinking or smoking in areas with MBOCA.
- Wash hands.
- Keep MBOCA containers closed when not in use.

Emergency Procedures

Fire
Fires can be controlled with carbon dioxide, dry chemical or foam.

- Follow your normal factory emergency procedure.
- Sound alarm.
- Evacuate.
- Call to summon emergency responders.


First Aid

- Eye:** Rinse with water at least 5 minutes. If irritation occurs, seek medical attention.
- Skin:** Remove contaminated clothing and flush with water at least 5 minutes. Wash thoroughly with soap and water. Seek medical attention if irritation develops.
- Inhalation:** Get fresh air. If there are breathing issues, seek medical attention.


Principle of General Ventilation

If you only have General Exhaust Ventilation:


- Place the source of vapors as near as possible to the air outlet which may be a fan (best), louvers or other opening.
- Make sure that the direction of air flow is carrying the vapor away from your breathing zone. Stand 'upwind' or turn the worktable as needed.
- Check around the hood for sources of crosscurrents and drafts such as fans or open windows & doors. Cross drafts may cause turbulence that can allow back flow into your breathing zone.



Bad



Better



Best

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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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