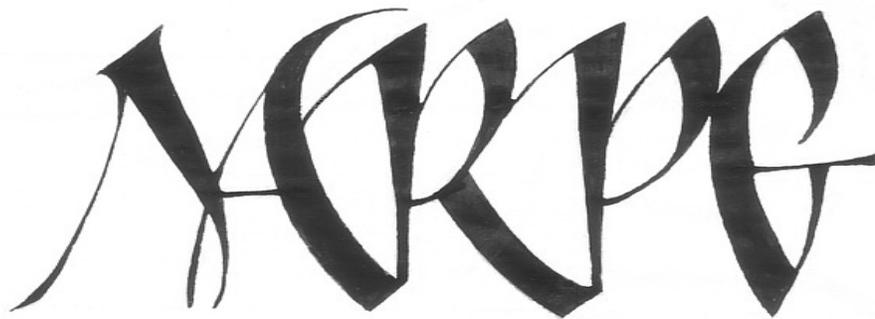


**MidAtlantic Rubber & Plastic Group
Fall 2010 Newsletter**



MidAtlantic Rubber & Plastics Group

www.marubber.org

Chair's Message



2010 has been a good year thus far for the MidAtlantic Rubber and Plastics Group. Our Spring technical meeting was well attended, the speakers gave very enlightening presentations and good discussions followed each talk. Thanks are due to Steve Henning for organizing such a high-powered slate of speakers. We are sad to see Steve leave the group, but his new responsibilities preclude him from continuing to volunteer his time.

The Summer golf was blessed with good weather. Robert Carroll, III and Wally Mack did their usual professional work in making sure everything went smoothly.

A membership directory for 2010 was developed and distributed by e-mail. This helped the Group save on printing costs. Hard copies were sent those without e-mail.

Unfortunately, we have had to cancel our September 16th technical meeting. We had hoped to organize a manufacturers' forum, but we were not able to accomplish this. We will have a basic educational and training seminar on Oct. 28th. This will include a plant tour of Home Rubber in Trenton, NJ.

Candidates for the Board of Directors will be announced soon. Jim Gayler, III has agreed to serve as Chair, a position normally ascended to by the Vice Chair. Don Slowicki is working on speakers for the Spring 2011 Technical Meeting that will be held March 3rd. The Fall Technical Meeting will be on September 22nd.

We will not be running a fishing trip this year. The Social Secretary, Chris Grossman, is looking into organizing a trip to a baseball stadium, either the Somerset Patriots or the Allentown Iron Pigs. A May / June time period is envisioned for this event.

Low attendance at the Golf Outing this year has meant that we will likely have to move to a public course and not be able to have a shotgun start. Robert Carroll, III is examining the possibilities.

Your MidAtlantic Rubber and Plastics Group is in need of volunteers. *Please*, if you are interested in participating in organization and running of the Group, please contact Ron Campbell at either roncampbell@gtweed.com or (215) 256-9521, x1878. A slate of officers will be named soon.

Don't forget the Fall ACS Rubber Division meeting. It will take place Oct. 12 to 14 in Milwaukee, WI. Visit the Rubber Division web site (www.rubber.org) for more details.

Bob Ohm
MARPG Chair 2010

Area Director Report

The 2011 Rubber Division Exposition will be held October, 12 to 14 at the Frontier Airlines Convention Center in Milwaukee, Wisconsin. The program will feature Advanced Materials in Health Care.

Possible Expo changes being considered are:

1. requiring anyone under the age of 16 to be accompanied by an adult at all times and
2. a blanket permission grant to use badge holders' images, likeness, actions and statements in any live or recorded audio, video, photographic display or other transmission, exhibition, publication or reproduction made of, or at, the event and any medium or context for any purpose, including commercial or promotional purposes, without further authorization or compensation

Rubber Division's created and sealed a Centennial Time Capsule, which will be displayed in the Division's headquarters. A list of the items within can be found on the website, www.rubber.org.

The Division is considering a request that the Spring meeting be held at locations other than Akron, Ohio in the future, citing past large attendance numbers as locations such as San Antonio.

Directors' Representative-Elect Bill Stahl is contacting Rubber Group members to fill out a survey. This survey is intended to provide information on what types of programs our members would like to see from the Rubber Division, such as technical symposia, educational workshops, publications, etc.

The Rubber Division's Science Librarian, Chris Lawson, has relocated to Houston, TX. The Division will redistribute his responsibilities to other staff to pick up some duties, other duties will be eliminated and yet others may be picked up by the University of Akron Library.

Meetings in 2011 will be April 25 to 27 and October 11 to 13.

Bob Ohm
MARPG 2010 Area Director

Preventing Metal-Catalyzed Degradation

Many transition metals such as copper, iron, manganese and nickel can catalyze oxidative degradation of rubber articles. Only trace amounts of pro-oxidant metals are needed to cause the rapid deterioration in rubber properties. Parts per million levels of metals may be encountered in rubber compounds due to impure raw materials or contact with metal during processing. In service, the rubber article may come in contact with copper or brass fittings or tubing that can also cause rapid deterioration of properties.

The effect of copper as a pro-oxidant is shown in the table below. Comparing natural rubber compounds A and B, the introduction of the rubber soluble copper stearate into compound B shows the vulcanizate gives a greater loss in tensile strength during oven aging and a higher rate of tensional creep with a shorter time to failure.

Compound	A	B	C	D
Natural Rubber	100.0	100.0	100.0	100.0
Atomite Whiting	70.0	70.0	70.0	70.0
Purecal CS	15.0	15.0	15.0	15.0
Suprex Clay	8.0	8.0	8.0	8.0
Stearic Acid	1.0	1.0	1.0	1.0
Zinc Oxide	5.0	5.0	5.0	5.0
Light Process Oil	2.0	2.0	2.0	2.0
Sulfur	2.5	2.5	2.5	2.5
MBTS	0.6	0.6	0.6	0.6
DPG	0.3	0.3	0.3	0.3
Copper Stearate	---	0.1	0.1	0.1
Diaryl-p-phenylene diamine	---	---	1.0	---
2,2-Methylenebis(4-methyl-6-t-butyl phenol)	---	---	---	1.0
Cured 30 minutes at 130 °C (266 °F)				
Aged 48 hours at 100 °C (212 °F)				
Tensile Change, %	-54	-72	-52	-36
Aged at 90 °C (194 °F)				
Tensional Creep at 22 hours	6.7	13.7	5.2	3.3
44 hours	11.2	36.4	14.6	5.3
88 hours	23.8	Fail	16.9	8.0
160 hours	Fail	---	37.5	13.8
184 hours	---	---	48.1	16.6

The inclusion of a metal-chelating antioxidant such as the para-phenylene diamine or the bisphenol provides protection against loss of tensile strength during oven aging and retention of modulus during tensional creep exposure.

The deliberate addition of a pro-oxidant metal in a rubber soluble form may permit the rapid screening of antidegradants in rubber articles that are expected to perform in contact with copper or other metals.

Submitted by:
Robert Ohm, Lion Copolymer

Education Committee Report

The Basics of Rubber Seminar / Tour

Thursday, October 28, 2010

8:00 A.M. - 4:30 P.M.

Trenton, New Jersey

The Education Committee of the MARPG periodically presents a one day seminar for the employees of our membership companies who have a desire to increase their basic knowledge of rubber technology. This one day training course focuses on terminology and the basics of the polymers, ingredients, compounds, processing, testing and applications. It is specifically designed to not be overly technically oriented so that the non-technical or other-discipline technical personnel can get a good introductory background on what rubber is all about.

We think the course is apropos for sales, customer service, technicians, lead men, engineers, clerical, etc. anyone who desires to be able to speak our language and to understand some of the background detail without getting immersed in chemistry or physics.

We need each of you to make sure that you spread the word in your company to those that you think can benefit. Perhaps you can post the notice on the bulletin boards.

The plan is to meet in the Trenton, NJ area for a full day session which will include presentations on a variety of topics, a light lunch and a hands-on tour of the Home Rubber/Ivanhoe Rubber facility in Trenton in the late afternoon.

The meeting place will be in or close to Trenton, NJ (to be determined). The day will start off at 8:00 A.M. where we will settle in for a series of presentations by Rubber Industry seasoned veterans who will cover everything from Terminology, elastomers and what makes them different from each other; ingredients and vulcanization, mixing and processing, and testing. After lunch you will visit Home Rubber/Ivanhoe to see the mixing and processing of rubber related to hose, tubing and specialty products. Home Rubber Co. has been in business for over 127 years and is one of the oldest rubber companies in the USA. You will see different types of elastomers in raw form as well as the warehouse full of ingredients. Mill mixing of a compound will be demonstrated as will calendaring of rubber sheet. The Ivanhoe section will demonstrate specialty rubber development, mixing and testing. During the tour there will be the opportunity to see extruders and the manufacture of hose/tubing on mandrels. We expect the day to end around 4:30 PM.

All of the above for \$20! How can you beat that??? Resource materials will be provided to take home.

We need to have anyone interested send an e-mail to Don Slowicki at don@homerubber.com to start the enrollment process. You can also call Don Slowicki at 609 394 1176 or fax him at 609 396 1985. We are asking that you respond by the end of September for sure so we can make proper plans.

Don Slowicki, Education Committee

Golf Outing

The annual MARPG Golf Outing was held at the Yardley Country Club in Yardley, PA on August 3rd, 2010. There were a total number of 47 golfers that enjoyed a marvelous time of golf and business interaction at the outing.

The number of golfers attending this year was dramatically under the number that had been committed to the Yardley Country Club. Although the MARPG was fortunate not to incur a penalty due to this low turnout, next years outing will have to be redesigned as the MARPG can no longer commit to the numbers to support a shotgun type of start.

We do now plan on having the 2011 MARPG golf outing in the August/September time period and will keep you posted on specifics as the plan is developed.

Robert E. Carroll III
Wally Mack
Golf Committee

Scholarship Report

2010 MARPG Scholarship Winners Announced

The \$4000 winner is **Ramzan Judge of Temple University**, sponsored by Linda Curtis.

The \$2000 second place winner is **Rabiul Ryan of Ursinus College**, sponsored by Linda Curtis.

Robert E. Carroll III
Scholarship Committee

Membership Report

Current Membership Status

Current Dues-Paying Members, & Emeritus Members - 184

Unresponsive (haven't acknowledged e mails or paid dues): 50

Returning: 71

Corporate: 64

Emeritus: 39

New: 18 (8 of these also in corporate members)

**Marty Sheridan
Membership Committee**

2010 Upcoming MARPG Dates to Remember

- **ACS Rubber Expo 2010** **October 12-14, 2010**
Frontier Airlines Center, Milwaukee, WI
<http://www.rubber.org/rubberexpo2010>
- **MARPG Education Course , Trenton, NJ** **October 28, 2010**
Basics of Rubber Seminar and Tour of Home Rubber Facility
Contact don@homerubber.com for information
- **MARPG Spring Technical Meeting** **March 3, 2011**
Site to be determined
- **MARPG Fall Technical Meeting** **September 22, 2011**
Site to be determined
- **Annual MARPG Golf Outing** **August/September 2011**
Date and Site to be determined