

ACS January 2009 Regular Meeting

January 29th, 2009
7:00 pm
101 Koch Center
University of Evansville

Speaker: Dr. Bill Hollar, Principal Engineer
SABIC Innovative Plastics

Title: A Process History of LEXAN*
Polycarbonate Resin

Dinner: 5:30 pm at Western Ribeye & Ribs
1401 N. Boeke Road
Evansville, IN

RSVP for dinner by January 28th to Derek Lake
Derek.Lake@sabic-ip.com

Abstract

Lexan aromatic polycarbonate (PC) based on bisphenol A (BPA) was originally invented in the 1950's. Its unique physical properties include transparency, extreme toughness and elevated temperature property retention. These attractive properties have resulted in market growth to greater than 3 million metric tons/year globally. Polycarbonate applications are widespread and include automotive, media, glazing, lighting and electronic equipment along with a myriad of consumer applications. Chances are excellent that you own several items made of polycarbonate.

This presentation will focus on the history and evolution of the Lexan polycarbonate manufacturing process and its tie to product performance and applications. Originally based on interfacial phosgenation processes, polycarbonate is also produced by melt transesterification processes. The key process features and a comparison of the two processes will be discussed.

Finally, as the market for polycarbonate matures, SABIC Innovative Plastics has increased its focus on producing novel Lexan polycarbonate copolymers with enhanced properties for demanding product applications. This has resulted in new process challenges and breakthroughs for commercial production. An example of a Lexan polycarbonate co-polymer process will be reviewed.