

# Chicago Society *for* NEWS Coatings Technology

Member of Federation of Societies for Coatings Technology

October 2002

www.chicagocoatings.org

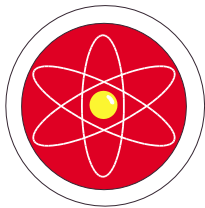
Volume 6, Issue 2

## The CSCT presents TECHNICAL COMMITTEE NIGHT Monday, October 14th • Steven's Steak House

### “CHEMICAL RESISTANCE OF SELF-CROSSLINKING EMULSION COATINGS FOR INTERIOR PLASTICS”

Brian Hanrahan - *Kyowa Hakko USA*

**B**rian Hanrahan received a PH.D. in Polymer Science from The Pennsylvania State University in 1985. After graduating, his first position was with DeSoto, formulating UV coatings. He then accepted a position with Union Carbide to develop UV cationic cure epoxy resins. Later, he moved to Japan as part of a chemist exchange program. In this capacity, he spent two years developing powder and automotive coatings inside a Japanese paint company for UCC. After the exchange program, Dr. Hanrahan accepted a new product marketing position for UCC. He eventually returned to the Desotech group of DSM as a product manager for optical fiber coatings. His current position is with Kyowa Hakko USA promoting new raw materials.



**C**ommercially available emulsions were tested for chemical resistance over rigid interior plastics (polypropylene, polycarbonate, and ABS). Hazardous Air Pollutants (HAPS) compliant formulations for the self-crosslinking emulsions were prepared. Substrates were pre-treated using a universal rotary electrode machine. Corona pre-treatment to reduce the surface energies of the substrates allowed testing of the emulsions without a primer coating. Chemicals tested were DEET, methyl ethyl ketone, isopropyl alcohol, ethanol, motor oil, vinegar, sodium hydroxide, deionized water, children's sunscreen, Windex with ammonia, coffee, and ketchup. Reported test results include minimum film forming temperature (MFFT), crosslink density and glass transition temperature (Tg) of the sample formulas.

In this study, ten commercially available self-crosslinking emulsions were tested for chemical resistance over ABS, polycarbonate and polypropylene. Each substrate was pre-treated with a universal rotary electrode machine. The coatings were sprayed and forced dry over the pre-treated substrates.

One and two week chemical spot tests on the coated panels were performed and evaluated both qualitatively and quantitatively. Bare substrates were also spot tested to aid the analysis. Twelve chemicals were used to determine the performance of the emulsions as simple clear coatings over these common interior plastic substrates.

Half of the coatings passed the chemical spot testing. Additionally, spot tests of the same coating used on different substrates showed significant substrate effects. Tg and crosslink density were measured using Dynamic Mechanical Analysis (DMA). All the coatings showed light crosslinking. Crosslink density was not a significant factor for increased chemical resistance in this study.

### CSCT MEETINGS:

(Information 630.271-4848)

5:00 CASH BAR

6:00 SPEAKER

7:00 DINNER

*Steven's Steak House*

*476 N. York Rd., Elmhurst, IL*

### Upcoming Events

**October 14, 2002**

*CSCT Technical Paper Committee  
Technical Paper Presentation*

**October 28-30, 2002**

*ICE Show - New Orleans*

**November 11, 2002**

*"Biocides in the Coatings Industry"  
Jerry Tracy, Acti-Chem*

**December 6, 2002**

*CPCA/CSCT Joint Holiday Party*

## Getting it Straight

### Society Notes & Changes

Get more information about CSCT news and events at

[www.chicagocoatings.org](http://www.chicagocoatings.org)

## In Memorium

*The Chicago Society for Coatings Technology recognizes the passing of friends and members in our Society and Industry.*

### Mr. Tony Sacco

Sacco Mid-States



## ANNOUNCEMENT TECHNICAL COMMITTEE MEETING

Dr. Brian Hanrahan and Arron M. Strepka, co-chairs of the Technical Committee, invite all interested members to join the Technical Committee. Our first meeting on will be on Wednesday November 20, 2002 at DePaul O'Hare campus at 5:15pm. The purpose of this meeting will be to collect ideas for the next committee project and will be followed by dinner, provided by the CSCT.

The Technical Committee is comprised of members of the CSCT who meet on a regular basis to plan, discuss, and oversee the project. These members bring to the group experience and expertise in many if not all areas of the coatings industry. Each member shares in the responsibility of choosing an appropriate topic, research, completing the necessary work, discussing the results, and ultimately publishing a paper in the Journal of Coatings Technology (JCT). Additionally, each member benefits from the opportunity to become exposed new coatings technologies, network with other coatings professionals and represent his/her company on a technical committee.

All who sign up will receive a letter outlining the meeting time, location and agenda. RSVP either by November 1<sup>st</sup> to 847-480-3144 (Arron) or by e-mail: [astrepka@velsicol.com](mailto:astrepka@velsicol.com). Please leave your name, company, phone number and mailing address. (E-mail address is appreciated but not required.)

Previous topics and accomplishments of the CSCT Technical Committee include:

### **The Chemical Resistance of Self Crosslinking Emulsions on Interior Plastic Substrates**

Presented at Symco 2002.

Topic submitted to JCT for Publication.

To be presented at ICE 2002 in New Orleans.

Technical Committee Co-Chairmen: Nancy Lindquist and Tom Yokoyama.

### **Variables Effecting Flattening Efficiency of High Solids Clear Coat.**

Poster presented at ICE 2000 in Chicago.

Technical Committee Co-Chairmen: Howard Robins and Tony Tortorello.

### **A Study of the Effect of Pigment Morphology on Film Properties on an Industrial Latex Coating**

Presented at ICE 1997 in Atlanta. (2<sup>nd</sup> Place Award.)

Published in JCT (Vol. 72, Issue 901, 2000).

Technical Committee Chairman: Keith Moody.

*All Technical Paper Committee Members are invited to listen to Brian's Presentation.*

### **CSCT/CPCA Joint Holiday Party**

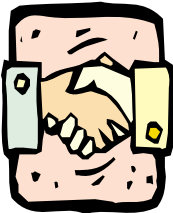
**December 6, 2002 • Marriott O'Hare.**

**Featuring: *The Blooze Brothers***

**For more information: [www.chicagopaint.org](http://www.chicagopaint.org)**



# CSCT Member Candidates for October 2002

<p>Scott Wenzel Sherwin-Williams <i>Active</i></p>	<p>Peter Trettin Intercorp <i>Active</i></p>		<p>Eric Adams Sud-Chemie Rheologicals <i>Associate</i></p>	<p>Elise Balsamo MD Both <i>Associate</i></p>
<p>Randy Carter Sherwin-Williams <i>Active</i></p>	<p>Mike Slawik ChemCentral <i>Associate</i></p>		<p>Henry Brooks MD Both <i>Associate</i></p>	<p>John Erbeck MD Both <i>Associate</i></p>
<p>Michael Foote ChemCentral <i>Associate</i></p>	<p>Renee Tripoli Eastman <i>Associate</i></p>		<p>Russell Heinzinger MD Both <i>Associate</i></p>	<p>Mary Keane Clariant Corp <i>Secondary</i></p>

What were you doing 25 years ago? If you were a member of any Society for Coatings Technology 25 years ago and are now a member of the CSCT you may qualify for the CSCT 25 year club; however, we need to know who you are.

Call or write: Vic Willis  
3149 Bending Creek Trail  
Crete, IL 60417  
708-672-7043

**E-mail your dinner selection to:  
howard.robins@victorreinz.com**

**Please provide name and number of guest attending by 10/10/02 .**

**Dinner Selection for October 14th:  
Family Style or Vegetarian upon request**

**or reserve by phone: (630) 271-4848**

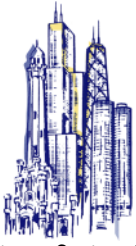
**Cost for Dinner - at the door:  
\$25 for members  
\$30 for Non-Members and Walk-ins**

Send this to Howard Robins, Victor Reinz Division/Dana Corp., 1945 Ohio St., Lisle, IL 60532:

I WILL ATTEND AND BRING \_\_\_\_\_ GUEST(S) FOR DINNER October 14th

DINNER SELECTION:       Family Style       Vegetarian

NAME \_\_\_\_\_ COMPANY \_\_\_\_\_



Chicago Society for  
Coatings Technology  
c/o Howard Robins  
Victor Reinz Division  
945 Ohio St.  
Lisle, IL 60532  
www.chicagocoatings.org

**Reminder:**  
Dinner Reservation response due by 10/10/02

Thanks to the Society's for participating and sending in their Membership Lists for mailing:  
Bob Klingender, *Chicago Rubber Group* • Richard Small, *Ink Society* • Brenda Svenneke, *CPCA* • William Arendt, *SPE*

## CSCT Calendar of Events 2002-2003

July 22	Golf & Tennis Outing		St. Andrews / Forest View
September 9	Design of Experimentation	Tom Donnelly, Peak Process LLC	Steven's Steak House
October 14	Technical Paper Presentation	CSCT Tech. Paper Committee	Steven's Steak House
October 28 – 30	ICE Show		New Orleans
November 11	Biocides in the Coatings Industry	Jerry Tracy, Acti-Chem	Steven's Steak House
December 6	CPCA/CSCT Joint Holiday Party	The Blooze Brothers	Oakbrook Marriott
January 6	Aerospace Coatings	Roger Brown, Akzo Nobel	Steven's Steak House
February 3	Practical Paint Making	George Goodwin, Elementis	Steven's Steak House
March 3	Defoamers	Andy Romano, Ashland Chem.	Steven's Steak House
April 7	The Coatings Economy	Ada Nielsen, BP Amoco	Steven's Steak House
May 2	Awards Banquet		Drury Lane Oakbrook

**President**  
GERRY CUCA  
Meridian Sales  
209 Brett Court  
Arlington Hts, IL 60005  
708.651.6311

**Vice President**  
HOWARD ROBINS  
Victor Reinz Division  
945 Ohio St.  
Lisle, IL 60532  
630.271.4848

### CSCT OFFICERS 2002-2003

**Treasurer**  
JOHN COX  
Sherwin-Williams  
549 E. 115th Street  
Chicago, IL 60628  
773.821.3089

**Membership Chairman**  
HERB WALTENSPIEL  
Neville Chemical Company  
1740 Kent Rd.  
Hoffman Estates, IL 60195  
847.459.3580

**Secretary**  
TONY TORTORELLO  
DSM Desotech, Inc.  
1122 St. Charles Street  
Elgin, IL 60120  
847.468.7765