



Carbospense™ K-700

Water Treatment Polymer News

Lubrizol's "Carbospense™ K-700 Water Treatment Polymer News" has provided timely information to water technologists since 1994. [Click here](#) to view this newsletter and many previous issues.

New Technical Publications Available

- ❖ Lubrizol presented "[Deposit Control Polymers for Stressed Phosphate-Based Cooling Water Systems](#)" at AWT's 2015 Annual Convention in Nashville, TN. This paper examined the performance of several commercial DCPs as components of phosphate-based cooling water treatment programs under simulated stressed operating conditions (e.g., high cycles of concentration and using treated municipal or industrial wastewater as makeup water). Static bottle tests, dynamic clay dispersion tests, and dynamic simulated test rig evaluations were used to evaluate DCP performance and the results correlated very well. The data collectively suggest that DCP performance increases with dosage and strongly depends on factors including DCP molecular weight and co-monomers (both type and relative amounts). The results indicate:
 - Lubrizol's Carbospense [K-775](#) and [K-798](#) copolymers outperform their respective competitive rivals.
 - Carbospense [K-798](#) is very well suited for use as a component of stressed phosphate-based CWT programs.
- ❖ Two technical papers were presented at NACE International's Corrosion 2015 in Dallas, TX:
 - "[Managing a Cooling System to Prevent Silica Deposition](#)" which discusses how Lubrizol's patented silica/silicate control technology facilitates operating cooling systems using high silica make up waters, reducing water consumption, and reducing treatment costs.
 - "[Water Chemistry Impacts on Cooling Water System Iron Oxide Dispersants](#)" that presents Lubrizol's investigations that show deposit control polymer (DCP) architecture (e.g., monomers types and amounts, functional groups, and molecular weight) and dosage influence DCP performance as a function of cooling system water chemistry.
- ❖ **DCP Thermal Stability Investigations**
 - Two articles based on Lubrizol's paper "[Deposit Control Polymer Selection Criteria for High Temperature Applications](#)" presented at the Association of Water Technologies' (AWT) 2014 Annual Convention in Fort Worth, TX were published in AWT's *The Analyst* in Aug-2015 and Nov-2015, respectively (see bullets below).
 - "[DCP Selection Criteria for High Temperature Applications, Part 1 - Polymer Characterizations](#)"
 - "[DCP Selection Criteria for High Temperature Applications, Part 2 - Polymer Performance](#)"
 - An article entitled "[Thermal Stress Impacts on Deposit Control Polymers,](#)" based on Lubrizol's NACE Corrosion 2014 presentation was published in the Sep-2015 issue of NACE's *Materials Performance*.
 - The articles above collectively summarize Lubrizol's recent investigations addressing the effects of thermal stress on several DCPs (e.g., polyacrylates, polymethacrylates, polymaleic acid, and acrylic acid/sulfonic acid copolymers and terpolymers). DCPs, before and after thermal stress, were characterized (e.g., composition, molecular weight, and acid number) and performance (as particulate [iron oxide and hydroxyapatite] matter dispersants and a CaCO₃ inhibitors). These articles provide industrial water technologists guidance for designing high temperature water treatment programs where DCP thermal stability and/or performance retention are critical criteria.

New Water Treatment Web Database

In Jun-2015, Lubrizol announced the [launch of a new web database](#) that provides easy, searchable access to our water treatment technical publications. You can view and search over six dozen paper, articles, and reference book chapters at [CK700 Technical Publications](#).

Acquisition News

On 31-Dec-2014, Lubrizol announced completion of the acquisition of [Weatherford's Oilfield Chemicals and Drilling Fluids Businesses](#) and the creation of [Lubrizol Oilfield Solutions](#).

****** Seasons Greetings and Best Wishes for the New Year! ******

Please contact your local Lubrizol sales representative or office with any questions or comments. You can obtain the name of your Lubrizol [sales and technical service team](#) for Carbosperse K-700 polymers by contacting Lubrizol's regional office (see below) for your location.

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