



Carbospense™ K-700

Water Treatment Polymer News

Since 1994, the “*Carbospense™ K-700 Water Treatment Polymer News*” has served as a means to provide timely information to Lubrizol’s water treatment chemical (WTC) customers. You may view this newsletter and several previous issues using [this link](#).

SAP EHS Module Implementation

Lubrizol completed global implementation of SAP at the end of 2011. During 2013, Lubrizol will begin phasing out an in-house system for MSDS and product label applications and implementing the state of the art SAP EHS (Environmental Health & Safety) module.

New Technical Papers and Articles Available.*

- ❖ The Winter 2012 issue of the Association of Water Technologies’ (www.AWT.org) *The Analyst* contains an article [Effects of Thermal Stress on Silica-Silicate Deposit Control Agent Performance: Part 2 - Particulate Matter Dispersion](#) (AWT-WA-12) that is the second of a two-part series based on LZAM’s technical paper (AWT-2010) presented at AWT’s 2010 convention in Reno, NV. The article discusses particulate dispersion (e.g., silica, magnesium silicate, iron oxide, and clay) and deposit control polymer (DCP) thermal stability as criteria water technologists should consider when evaluating silica-silicate deposit control agents. DCPs lose performance to varying degrees depending upon the thermal stress severity and duration. The performance data presented indicate that Carbospense K-XP229 (CP7) is an excellent particulate dispersant, and is resistance to performance loss caused by thermal stress.
- ❖ Lubrizol presented [Water Treater Deposit Control Polymer Evaluation Criteria and Considerations](#) (AWT-2012) at AWT’s Annual Convention in Palm Springs, CA. This paper presents data for a series of laboratory screening tests used to evaluate the performance of ≈2k MW water and solvent polymerized polyacrylates (PAAs; i.e., Carbospense K-7028 & K-752 [CK7028 & CK752, respectively]) and a high performance acrylate terpolymer (Carbospense K-798 [CK798]), and 1:1 blends (active solids basis) of each PAA and CK798. The data indicate the following:
 1. CK798 due to two sulfonic acid groups provides Ca/P inhibition and iron oxide dispersion that is superior to the PAAs (CK752 & CK7028).
 2. CK752 and CK7028 due to their carboxylate content provide better calcium carbonate and calcium sulfate inhibition than CK798.
 3. PAA and CK798 blends provide performance characteristics that are a hybrid of the components and some synergism most notably with CK752.
 4. CK752 provides unexpected Ca/P inhibition, iron oxide dispersion, and calcium ion tolerance properties that are attributable to the special architectural properties resulting from Lubrizol’s solvent polymerization manufacturing process including distinctive end groups and branching not reflected in water polymerized polymers such as CK7028.

* Electronic copies of these technical papers & articles above as well as many others may be viewed [here](#).

Updated Deposit Control Agent Applications Brochures and New Product Use Considerations Technical Data Available.*

The documents listed below reflect a variety of updated and new information:

- ❖ **Carbospense K-775 Acrylate Copolymer** (CK775-WT) expands the comparative data vs. competitive AA/SA copolymers and bases for superior performance provided by CK775.
- ❖ **Carbospense™ K-XP229 Carboxylated Copolymer** (CKXP229-WT) was updated to incorporate data from Lubrizol's IWC-11-61 technical paper (see [Factors Impacting Silica-Silicate Control Agent Performance in Industrial Water Systems](#)) and Lubrizol's Aug-2012 presentation at the American Chemical Society's annual meeting.

Carbospense K-700 polymers supplied as liquids are stable water solutions that may freeze when subjected to extreme cold but are freeze/thaw stable; upon thawing, increases in viscosity and/or haze may occur. These changes may occur either as a result of freezing and/or extended storage and are discussed in a new technical data sheet entitled **Carbospense K-700 Polymer Exposure to Cold Weather Conditions**.

* Contact LZAM's location, distributor, or sales agent noted below as appropriate.

****** 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 the Carbospense K-700 polymer sales representative, distributor, or agent for your area by contacting LZAM's regional office (see below) for your location.

LZAM Locations & Sales Agents within the U.S.A.

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USA East Coast & Midwest Sales Agent	USA West Coast Sales Agent
<p>ZIBEX, Inc., P.O. Box 3009, Duluth, GA 30096 P/770-417-1426, F/770-417-1429, zibexinc@cs.com</p>	<p>Creative Performance Chemicals, Inc. 18760 E. Amar Road, Ste. 170, Walnut, CA 91789 P/909-869-1186/ F/909-869-5840, cpchem@aol.com</p>

Locations & Distributors Outside the U.S.A.

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