

Pool and Spa Water Treatment Applications

Using OxyChem's Solid Calcium Chloride Products

INTRODUCTION

Calcium chloride manufactured by Occidental Chemical Corporation ("OxyChem") contains small amounts of bromide (<1%). In pool and spa applications, this naturally occurring bromide impurity can potentially interact with other pool chemicals.

HEALTH-RELATED INFORMATION

The presence of bromide in pool and spa water is not uncommon. Bromide is present when bromine-based disinfection systems are used. Sodium bromide is sometimes used as an algacide treatment for pools. Also, bromide is a natural component of seawater and other "natural" water sources that may be used as source water in pools and spas.

However, for pools which the water is disinfected with ozone, the ozone can react with bromide and may form bromate. While the United States Environmental Protection Agency has classified bromate as a probable human carcinogen, the World Health Organization states in their Guidelines for Safe Recreational Water Environments, "Ozone

can react with residual bromide to produce bromate. This is of concern in drinking water systems but will be of lower concern in swimming pools."¹

POOL MAINTENANCE-RELATED INFORMATION

A drop in free chlorine may be observed when OxyChem's calcium chloride is added to a pool or spa which uses a chloride-based disinfecting system. Pools that receive significant exposure to sunlight may also see an increase in chlorine consumption. The magnitude of these effects will be situation specific.

SUMMARY

For more detailed information on this subject, refer to the World Health Organization publication cited within. It is ultimately the customer's responsibility to determine if calcium chloride with elevated levels of bromide is appropriate for water treatment applications in pools and spas.

¹ *Guidelines for safe recreational water environments, Vol. 2, Swimming Pools and Similar Environments*, World Health Organization, ISBN 92 4 154680 8, 2006, p. 68.

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