Sodium Chlorate Crystals

Did You Know?
A serious problem can occur with dry (powdered) sodium chlorate crystals. As bleach around pump seals dries and decomposes, the “white powder” found on the surrounding surfaces can contain high levels of sodium chlorate. This is due to the high levels of heat found at pump seal faces (especially common with outside seals).

If the dry powder is hit with a hammer, as may occur when disassembling a seal, the chlorate can literally explode and cause serious injury to the person working on the seal.

A typical situation as to when this might occur would be if a maintenance employee working on the bleach production line notices the white powder on some piping and attempts to wipe the dry powder with a cloth. The friction created between the powder and cloth could spark and ignite, possibly causing injury.

Despite the seriousness of this potential hazard, this issue is not commonly addressed in documents about sodium hypochlorite.

A simple solution to this potentially dangerous situation is to wash the areas under repair first with water and, in normal plant operation procedures, to clean and repair any leaks as well as to replace pumps and seals that create dry powder near the pump seal.

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