

**LOW LEAD RELEASE PLUMBING COMPONENTS MADE OF COPPER
BASED ALLOYS CONTAINING LEAD, AND A METHOD FOR
OBTAINING THE SAME.**

ABSTRACT

Lead brass components for potable water distribution circuits (e.g., plumbing
5 components made of CuZn39Pb3, containing 3% Pb), also chromium plated
ones, are subjected to a lead-selective surface etching to reduce, in operation,
the release of Pb caused by Pb surface "smearing", resulting either from
machining or molding; said elements are firstly contacted by an aqueous
solution of an acid capable of forming soluble Pb salts, preferably a non-
10 oxidizing solution, by simply dipping the components in the solution, e.g. a
solution of 0.1 M sulfamic acid, at 20°-50° C for 10 to 50 minutes, and,
subsequently, the elements are passivated by immersion into a strong base
aqueous solution, e.g. a solution of 0.1 M NaOH at 20°-25° C, for
approximately 10 minutes; in this manner, plumbing components made of a
15 copper based alloy containing Pb are obtained, which components, after 15 days
of test according to US NSF STD61 procedure, release Pb in an amount less
than 0.025 µg for each ml of the internal volume of the component delimited by
metallic walls remained in contact with water during the testing period.

No Figure.