

#### HEATBATH® CORPORATION



# CONTROLLING ALKALINE CLEANER BATHS

Alkaline cleaning is commonly used to remove a wide variety of soils from metal substrates prior to most metal finishing applications. A properly



cleaned surface is the first step towards producing a quality finish. Alkaline cleaners are usually applied by immersion or spray. The parameters used to operate the cleaner bath will vary depending on the method of application. These parameters are interrelated due to the fact that a fixed amount of energy is required to clean a part. This energy is a combination of chemical (cleaner concentration), thermal (bath temperature) and mechanical (agitation, spray impingement, etc.). It is for this reason that immersion cleaners are typically used at higher concentrations and temperatures compared to spray cleaners. As alkaline cleaners are used there are chemical changes that take place that effect the concentration of the cleaner. Saponification occurs when oils and fats react with alkali to form soap. Carbonation occurs when carbon dioxide reacts with alkali to form carbonate. Both of these chemical reactions result in the loss of alkalinity or concentration of the cleaner. It is important to monitor the concentration of the cleaner bath and make additions to maintain the target concentration that has been established. A simple titration can be used to determine concentration. For those facilities that do not have the luxury of their own laboratory, a tank side test kit can be used. The following is a quick video demonstrating the use of this test kit:

#### **HOW TO ORDER A TEST KIT**

Test kits and titrating chemicals can be ordered directly from Aquaphoenix Scientific in Hanover, PA. They are an ISO 9001 certified company that specializes in reagent manufacturing and customized test kits. We have had unique Heatbath item codes created for our titrating chemicals and test kits for many of our products. Lists of these items with their corresponding codes can be found on our website using the following links:



AquaPhoenix Titrating Chemicals for Heatbath

#### AguaPhoenix Test Kits for Heatbath

Orders can be placed with AquaPhoenix either by phone, 866-632-1291 or by email, <a href="mailto:sales@aquaphoenixsci.com">sales@aquaphoenixsci.com</a>. Please reference customer code C4005 when placing your order. If you do not see an item listed, please contact Diana St Jacques at <a href="mailto:diana@heatbath.com">diana@heatbath.com</a> or by phone at 413-452-2031.

## UNI KLEEN 58 - A NOTABLE ALKALINE CLEANER

Uni Kleen 58 is a highly alkaline liquid cleaner for immersion applications. It is potassium based and non silicated for free rinsing. Uni Kleen 58 will split oils to the surface of the solution for subsequent removal. For added detergency with emulsifying properties, Uni Kleen 58DA can be used. These cleaners are ideally suited for high production phosphate lines.

Visit our <u>Cleaner</u> section of our website for more information on our full line of cleaners.



### **Contact Heatbath**

(413) 452-2000 www.heatbath.com





