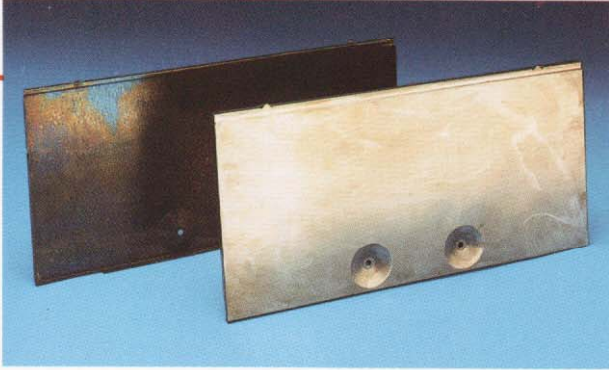


KOLENE®

**KGC**  
CLEANING/DESCALING  
SOLUTION



**Kolene KGC is a broad-spectrum, non-corrosive cleaning and brightening agent** for metals and

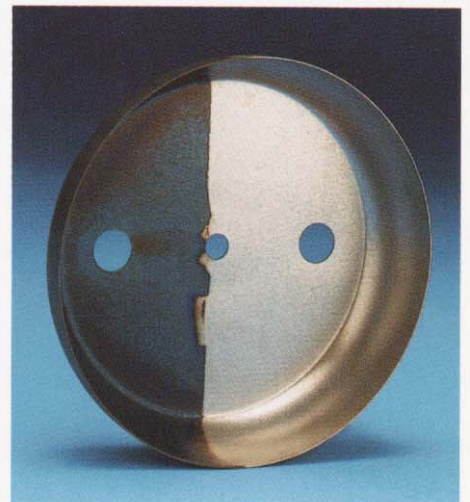
alloys including aluminum, copper, brasses, bronzes, stainless steels, precious and semi-precious metals and many "exotic" alloys. Users include manufacturers of castings, forgings and stampings, precision extrusion dies, foundries and manufacturers of automotive, appliance and aerospace components.

**KGC selectively removes light oxide films**, rust and scale without substantial effect on the basis metal. By varying bath concentration, temperature and immersion time, it can be used to remove heavy to light scale, even from difficult-to-process materials. For example, the oxides which form on stainless steels are often resistant to traditional descaling techniques; to remove them with strong mineral acids can cause pitting and etching of the substrate. In such cases, KGC is a practical alternative which will not compromise surface quality.

**A key benefit of KGC** is its ability to remove light soils and oil films concurrently with surface scale/oxide, thereby eliminating the time and cost of multiple cleaning stages.

**KGC is ideal as a post-treatment** for heat-treatment operations. Applied to formed or sheet product it adds luster or brightness and can retard tarnishing. Because it is a metal surface activator, it is a preferred pre-treatment for painting, plating and other coating operations demanding a chemically clean surface.

**KGC offers the advantage of 10 years** of documented performance under a wide variety of operating conditions. It offers versatility of use, a high degree of process flexibility and is cost-effective for processors of all sizes. KGC has low toxicity, is relatively non-corrosive and is far simpler and less costly to dispose of than conventional acid pickling solutions.



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## PHYSICAL DATA

**Appearance:** white to cream colored, granular powder

**Odor:** pleasant, faintly aromatic odor

**Solubility:** essentially complete at recommended use levels; solutions may be slightly turbid  
KLC, a concentrated liquid form of KGC, is also available.

**pH:** 3 @ 100 g/L

## EQUIPMENT

Because of its non-corrosive character and low operating temperatures, almost any acid-resistant construction material can be used satisfactorily to

handle and contain KGC. Glass or enamelware, acid resistant brick, PVC, polypropylene, polyethylene, fluorinated polymers, nylon, rubber, and chromium-nickel grades of stainless steel are among suitable materials. Although KGC does not evolve any objectionable fumes, it may be desirable to provide large heated tanks with an exhaust hood to remove water vapor.

## OPERATIONAL INFORMATION

KGC may be mixed with hot or cold water. The concentration may be varied from about 50 g/L (less than 8 oz/gal) to about 300 g/L (2½ lb/gal) depending upon the tenacity of the oxide or soil. The temperature may range from room temperature to boiling. Immersion times can be a few seconds to an hour or longer, depending upon the specific application.

## BEFORE YOU DECIDE...ASK FOR A DEMONSTRATION OR PRODUCT SAMPLE

In late 1987, Kolene made available to the industry an important new tool for research and development. Located at our Detroit headquarters, Kolene's R&D line is the largest equipment of its kind devoted exclusively to research. Designed to demonstrate the capabilities of Kolene products on a wide variety of parts, the demonstration line has a work zone measuring 3½' x 4' x 4'. Alternatively, Kolene will make a product sample available to qualified manufacturers for testing in their own facilities. For more information, contact your Kolene sales representative.

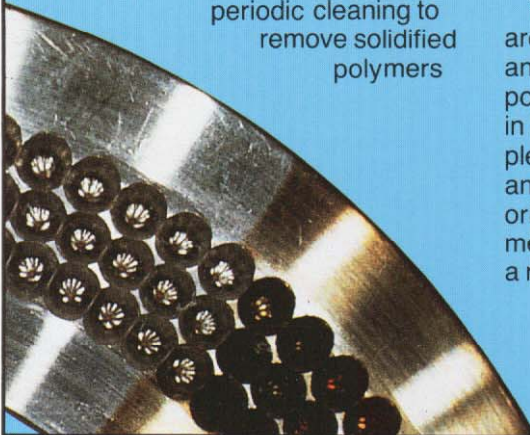
## CASE HISTORY

Producers of synthetic fibers such as nylon and polyester extrude the molten polymers through fine holes in a die known as a spinnerette.

These spinnerettes require periodic cleaning to remove solidified polymers

and contaminants. After cleaning, an oxide layer is often formed on the spinnerette which may affect its performance and also make inspection difficult.

The dimensions of the spinnerette are critical. This precludes the use of any mechanical or harsh chemical post-treatments. A brief immersion in KGC, however, quickly and completely removes the thin oxide layer and restores the spinnerette to its original luster. No measurable dimensional changes take place as a result of the KGC treatment.

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