

MULTAN®

Solutions for the
Metal Processing
Industries



Henkel

– Quality with Brands and Technologies



When one considers the way the Henkel Group has developed, the enduring constants are entrepreneurial spirit, vision and competence. Founded in 1876 by Fritz Henkel, the Company today holds leading positions in its three strategic business areas – home care, personal care, and adhesives, sealants and surface treatments.

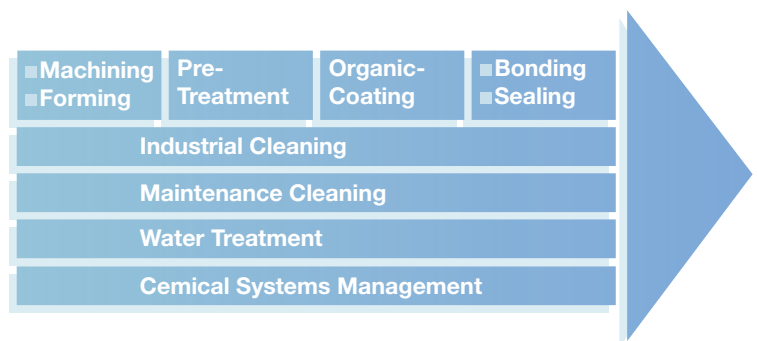
Henkel's vision of developing brands and technologies that make people's lives easier, better and more beautiful is the driving force in all that we do. The key factor behind this is the ability to respond quickly to customer wishes, to accelerate innovations, and to continuously open up new markets with trend-setting solutions.

Henkel Technologies

With the widest range of adhesives, sealants and surface treatments and specific process know-how, Henkel offers unique business opportunities for industrial customers in almost all sectors. Our customers receive tailor-made system solutions, optimally adapted to their production processes. Henkel gives you an unparalleled level of knowledge, quality, innovation, product and application diversity, reliability and customer support. Over 90 production centers guarantee optimum supply and logistics in all regions of the world.

Covering the Industrial Value Chain

Henkel's product and service portfolio covers the industrial value chain. We offer state of the art metal pre-treatment technologies, lubricants and industrial cleaners as well as adhesives and sealants solutions for product assembly and packaging. This extensive range is complemented by maintenance cleaners, water treatment applications and Chemical Systems Management.



MULTAN®: One Range – Five Products – 90% of Applications



MULTAN® Technology

For more than thirty years Henkel has been in the front line of developing best in class solutions for the metal processing industries. MULTAN® has set industry-wide standards for technical performance and cost-effectiveness in coolant applications. MULTAN® features have created an innovative push in metal processing:

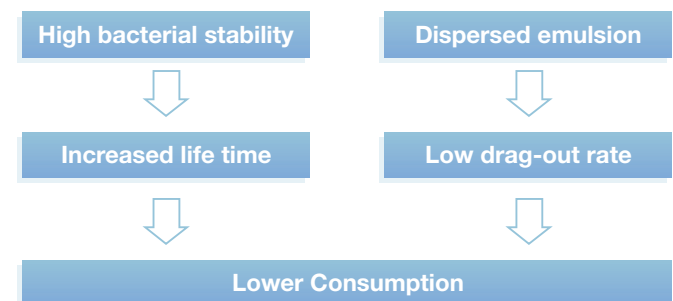
- **High Cleanliness**
- **Low Scrap Rate / High Surface Finish**
- **Lower Consumption**

Covering 90% of all Applications

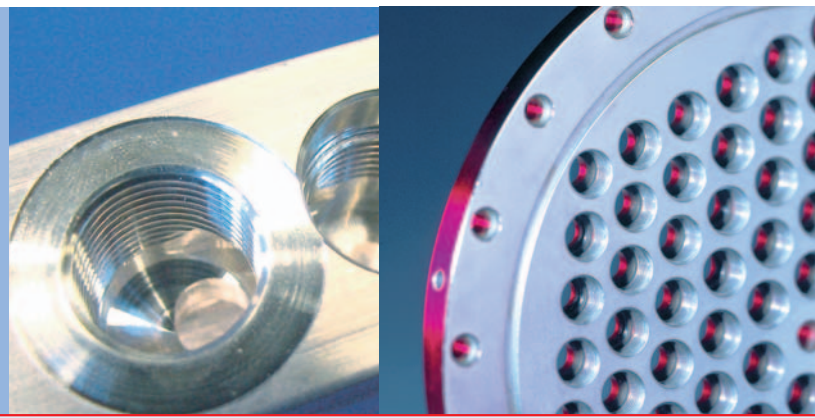
MULTAN® is applicable on all relevant light metals, particular aluminum without discoloration, iron and steel alloys, and non-ferrous metals. MULTAN® can be used in nearly all machining processes whether circular or surface grinding, drilling, deep hole drilling, boring, turning, milling, tapping, thread milling, flow turning, or reaming with single-edge reamers. With its features the MULTAN® range covers approx. 90% of all metal processing applications.

Patented Emulsifier System

Our patented emulsifier technology makes for good run-off characteristics due to the wetting properties, resulting in low drag-out rates. Thus, replenish rates are minimized. Prominent rinsing properties reduce the consumption of industrial cleaners. Unlike standard coolants, MULTAN® products permit in-process storage periods, demonstrating the excellent anti-corrosion behavior.

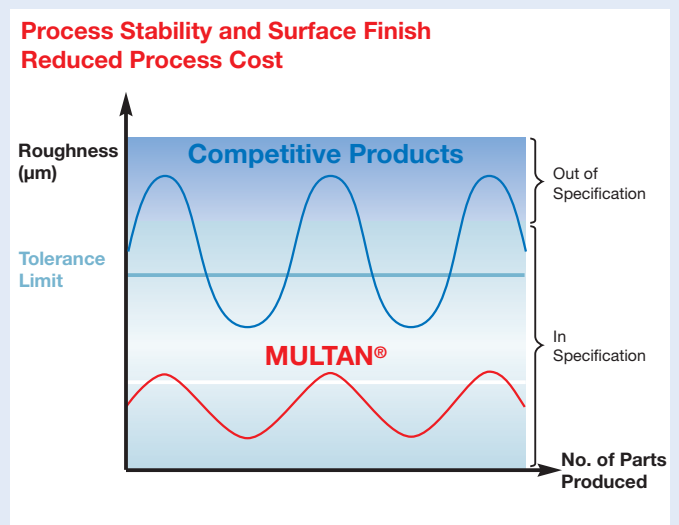
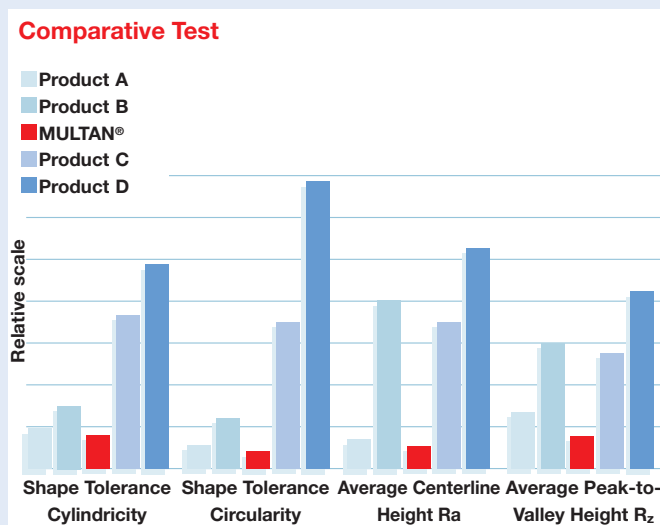


Exceptional Characteristics



Tribological Performance

Tribological performance is the key parameter in coolants. Low shape tolerance and surface roughness measurements as well as the low average peak-to-valley height show outstanding results for the MULTAN® range. The consequence is an overall economically low scrap rate.



Modular System

Machined products pass a number of cleaning and pre-treatment baths in the processing sequence. Optimum outcomes are achieved with an integrated process management, for which MULTAN® high-performance coolants – with their emulsifier, corrosion inhibitor and lubricant

modules – have been specifically rated. Henkel cleaners used in the process are based on the same emulsifier and corrosion inhibitor modules. The positive effect of this modular system lies in the high compatibility between machining and subsequent cleaning stages.

More than just a Product



Technical Service

Our technical service helps to optimize the process on site. We analyze the customer's production process, including the determination of parameters for the metalworking and cleaning process and the corresponding products. The process will be controlled to guarantee optimum performance.

Workshop

MULTAN® products have all been tested in our own workshop. This does not only guarantee the excellent performance of our coolants but also gives the opportunity to test and optimize critical applications on a small scale before they are implemented.

Laboratory Service

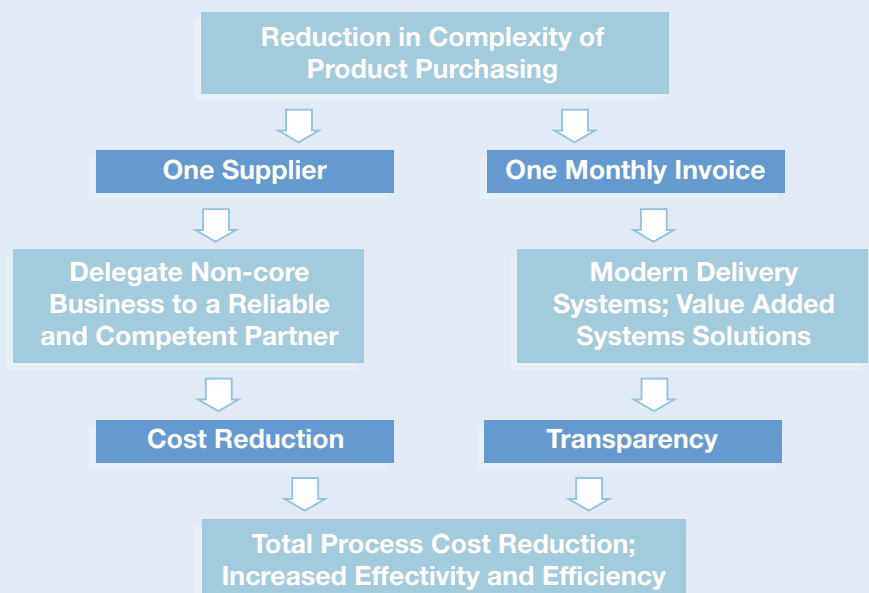
Our laboratories conduct biological tests to determine the bath concentrations and optimum dosages for replenishments. The aim is to prevent overdose and unnecessary costs.

Equipment

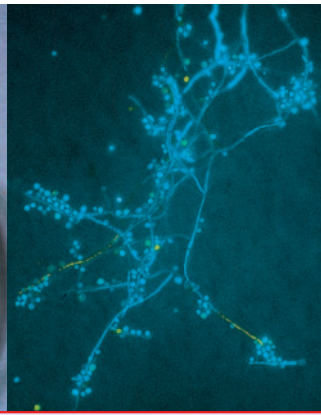
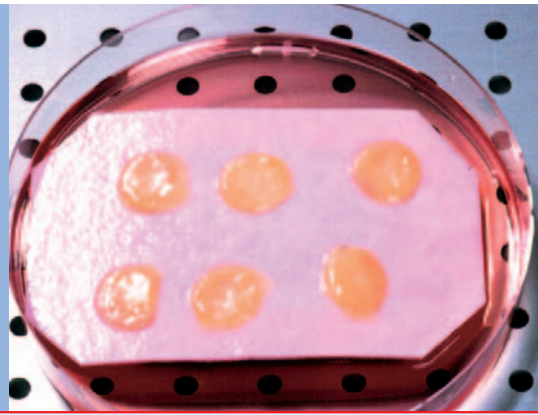
In order to optimize the consumption and to maintain costs on a low level, we provide tried and tested dosing equipment.

CSM

To make our customer's business more effective and efficient, we offer Chemical Systems Management. This partnership covers the supply and delivery of chemical products and services to reduce total process manufacturing costs.



Focus on Health, Safety and Environment



Quality from Henkel means that the products not only show excellent performance in the production process. It is also important, that the products have superior features in respect to health, safety and environment.

MULTAN® shows an outstanding dermatological performance.

Dermatological Tests

Our department of dermatology is working with two different skin models to ensure the highest level of safety. With the help of the BUS- (=bovine udder skin) test, the dermatological compatibility of the coolants is examined. The in-vitro skin model test replaces the usage of skin samples, as it is a replication of the skin with its three layers. This simplifies the testing process significantly. In the dermatology our know-how from the cosmetics business provides a profound base. All MULTAN® products have been tested and proved less skin irritating.

Bacterial Stability

MULTAN® offers best bacterial stability. This property, apart from reduced ecotoxicity, prevents the formation of tacky residues on tool changers, sensors or machine tools. Biological tests are used to determine bacteria and germs quantitatively and qualitatively and to develop stable products. The high bacterial stability leads to increased bath life time and therefore a cost reduction in maintenance. Apart from the classical methods we use innovative tests like Direct-Epifluorescence-Filter-Technology (DEFT) and FISH-Technology (Fluorescence-In-Situ Hybridization) to receive faster results.

**We're there
whenever you
need us.**



anywhere... anytime...

To find out what we can do for you, and how you can benefit
- simply call us or visit our Internet site.

We're there whenever you need us
- 24 hours a day and 365 days per year



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