

## AirForge® Glass Coating



## protect! lubricate! isolate!



# Tough fluids for your applications



Dr. Manfred Storr Managing Director

When Carl Christian Held first began with the production of machine oils and greases in 1887, he laid the foundation of a medium-sized company which developed itself over centuries into a specialist in the lubricating oil industry. The oelheld GmbH has existed in its current form since 1989 and in 1973 Dr. Manfred Storr has become the managing director.

Numerous machine manufacturers develop in cooperation with us products which are specifically designed to meet the requirements of their machines. This, of course, applies to our customers, too.

Many years of experience in the High-Tech lubricants sector enable us to focus on the specific needs of our customers and to adjust existing fluids to various production processes.

Innovative fluid management, stringent product development and quality assurance are the key to the success of our products.



#### **Human Technology**

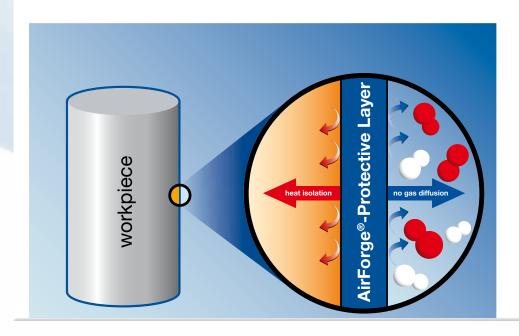
- Human technology is not just a trademark at oelheld GmbH it is a guiding principle. Low
  risk potential as well as environmental safety of the products and the application are most
  important for us.
- Following the principle we develop fluids that are best-suited for the application of our customers but also provide the best possible health and environmental aspects. Therefore our production plant is based on special sealed floors and equipped with the latest blending technology which provides additional safety.
- Human Technology for Man, Environment and Machines our contribution toward a better future!

## **Glass Coating**



#### AirForge® - protective Shield -

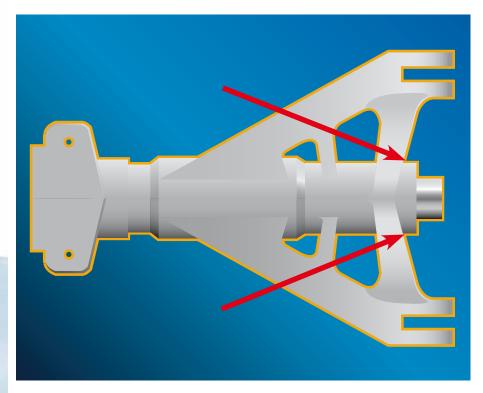
The AirForge products have been primarily developed for the aeronautical forging industry. The principal objectives was to develop a glass coating to protect the work piece against corrosion, gas diffusion and good heat retention. Also the best lubrication for the forging process is guaranteed. These properties lead to excellent material flow during the forging operation, for parts out of titanium-, nickel based or special steel alloys.



## AirForge® - Glass Coating -



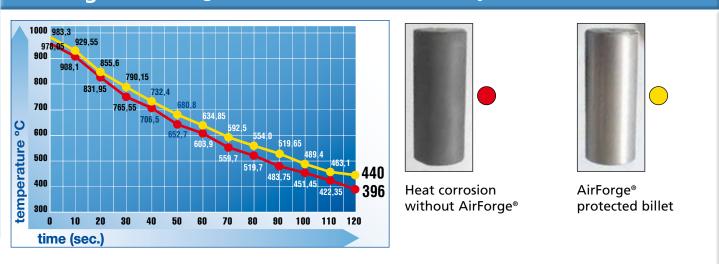
#### AirForge® - high flexibility of the lubricating film -



Because of the exceptional high elasticity of the lubricating film, AirForge is capable of following complex geometry, thus reproducing fine details from tool forms.



#### AirForge® - Cooling down results under laboratory conditions -



#### AirForge® - Your health benefits -

The development of the AirForge®glass coating products follows the latest European Union regulations. Therefore the products contain no dangerous additives like lead, bismuth, chromium, alcohol or any other solvents.

### Leaders in innovation by tradition



#### AirForge® - Your benefits -

- Good tool die form detail
- Application
  - ... by paint brush, roller, sprayed by airless-spraying or Electrostatic-spraying-systems.
- Good adhesion
  - ... to the work piece after drying (also on difficult shapes).
- Very good heat isolation
  - ... and heat retention which leads to a better material flow.
- Very good high temperature lubrication elasticity
  - ... because the glass coating can follow the deformation of the work piece without breaking down.
- Barrier layer against gas diffusion
  - ... oxygen and hydrogen.
- No chemical reaction on metal alloys
- Good seperation properties
  - ... no adhesion between forging die and work piece and therefore no wear.
- Compatible
  - ... with all regular used forging lubricants.
- AirForge<sup>®</sup>
  - ... products can be diluted with deionised water.



#### Research and development department

The engineers and technicians in our Research department develop tailored products here that have proven themselves worldwide for many years using the latest basic oil and additive technologies.

Metal processing oils, dielectrics and water-miscible cooling lubricants account for the largest proportion of our broad assortment of basic products. We regard these areas as our spheres of key competence and have proved this through numerous patented and extremely successful products.

Should you need more than just a standard product or wish to increase the productivity of your production, come to us and put our laboratory to the test. We guarantee a long service life for many of our products and also carry out regular analyses of your products currently in use.

New research projects are the catalyst for permanent further development of existing products. Therefore we are in the position to develop new technologies and realize customer specific demands. We guarantee you that we are always acting at the pulse of time.

#### Challenge us!

#### High-tech products for machines - worldwide!

oelheld GmbH is not only represented with its own sales offices and production plants in France, Great Britain and the USA, but also has various representatives in most countries.



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Human Technology for man, environment and machines



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