

# Perfect Surfaces



**munk**  
**+ schmitz**

## Hygienic Tank Surfaces with Munkadur® Linings

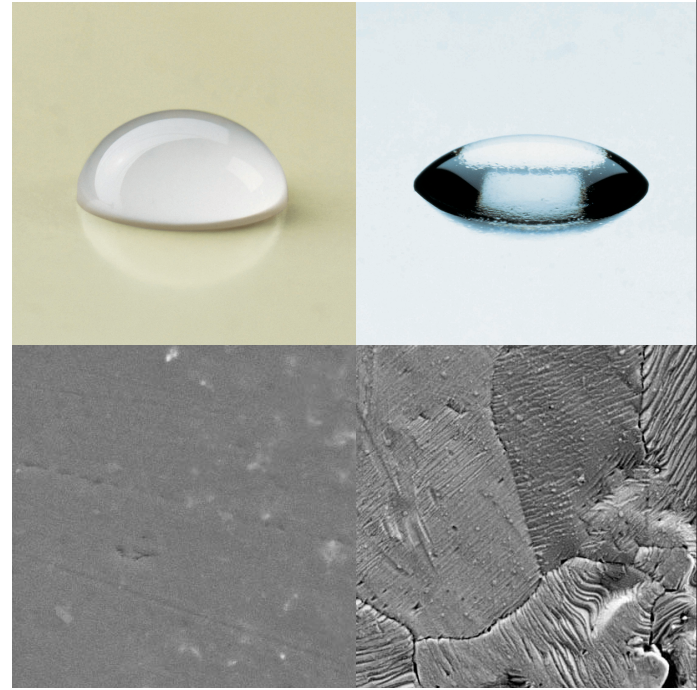
In the manufacture and storage of beverages and drinking water the surface of a tank as interface between tank and filling medium is of prime importance.

Munkadur® epoxy lining systems fulfil the following major requirements:

- hygienic conditions due to a smooth, easy-to-clean surface
- neutral taste by using only solvent-free agents and other substances approved for coming into direct contact with foodstuff
- effective corrosion prevention due to high-thickness coats
- long life due to high chemical resistance

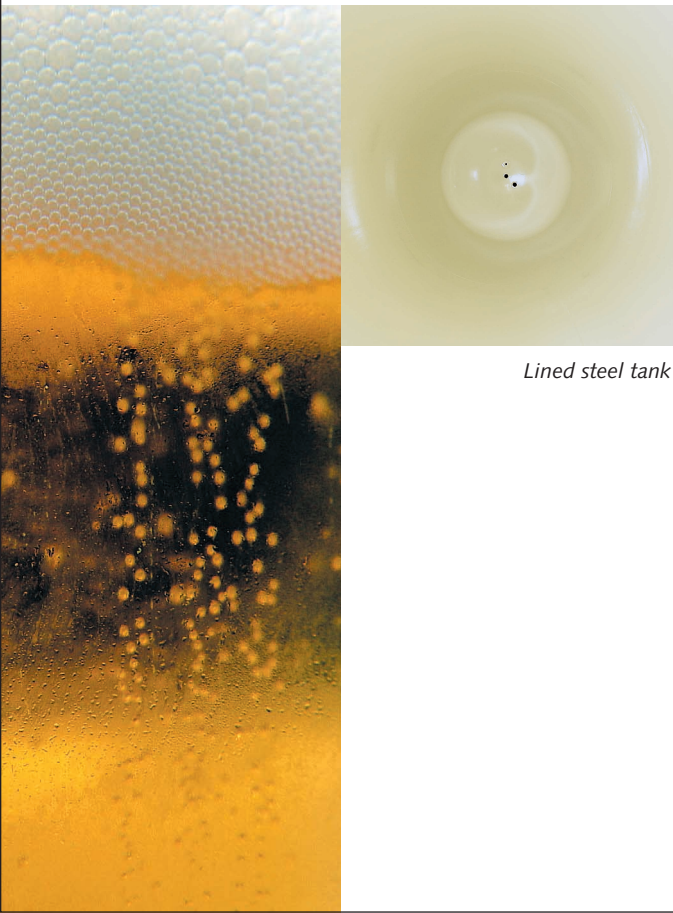
Munkadur® surface (hydrophobic)

Stainless-steel surface (hydrophilic)



SEM micrographs, 5000-fold magnification

Sparkling beer



Lined steel tank

## More than 50 years of experience in the beverage industry

Since its foundation Munk + Schmitz has been engaged in the lining of tanks for the beverage industry and water supply utilities. The solvent-free, cold-curing epoxy system Munkadur® was launched in the 1960s and since then has been continually improved to meet varying requirements of tank operators.

Today, Munkadur® is one of the most widely used lining systems in the world. Licensees in the USA, Spain, South Africa and Hungary formulate and apply Munkadur® in strict conformity with our quality requirements.

## ***Benefit from the advantages offered by Munkadur®***

Munkadur® can be applied on a wide variety of substrates such as mild steel, stainless steel, aluminium and concrete.

Its extremely smooth finish allows cleansing on cold basis using customary agents. Low concentrations drastically reduce operational costs and contamination of effluent water.

When regularly inspected and repaired Munkadur® linings enjoy a long life and will last for decades.



*Fresh tap water*

*Lined concrete tank*



## ***Safe storage of drinking water***

Drinking water is usually stored in concrete tanks. If at all, tank surfaces are provided with a mineral lining.

Recently, plastic-based lining systems have become increasingly popular because of their positive properties. By protecting the surface of a concrete tank with Munkadur® linings its service life can be substantially extended.

Moreover, the smooth and non-porous finish of a Munkadur® lined tank surface counteracts contamination by the adherence of organic and anorganic substances.





View of the Munk + Schmitz production and development facilities

Founded in 1890 Munk + Schmitz originally built apparatus and tanks for the chemical industry. Later on, the activities focussed on the production of large tanks for the beverage industry.

In the course of this production step Munk + Schmitz acquired extensive know-how concerning surface finishing technologies such as airblasting and coating at a very early stage.

Today, the development, formulation and application of lining systems is a major field of activities.



## **Approved to section 19 I of the German Water Resources Act Approved to DIN EN ISO 9001:2000**

Our certified quality management system leaves nothing to chance:

- strict raw material incoming inspection
- permanent surveillance of lining components' production
- optimum substrate preparation
- continual supervision of ambient parameters during application
- 100% pore testing of finished lining as well as measurement of coat thickness
- keeping a lining sample of each individual lining operation

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