

## Introduction GlassChemConsult

We are pleased to introduce GlassChemConsult as a supplier of products and systems for the glass industry.

Since company foundation in 1999, GlassChemConsult has become one of the leading suppliers of products and systems for the glass industry. We are successfully selling world-wide:

- the product *GlassChem HOT 99* for hot end coating
- the products *GlassChem CC 25* and *GlassChem LP 25* for cold end coating
- systems for hot end and cold end coating
  - *GlassChem HECSt 1300* and *1600* (hot end coating station)
  - *GlassChem CES* (cold end spraying unit)
  - *GlassChem DOS* (cold end dosing unit)
- original spare parts for all existing systems

### Technical support

Being a reliable and competent partner for you as our customer, we provide – on request on a very short-term basis - comprehensive technical support to you for this special field of application. As a result, the products, systems and know how of GlassChemConsult do contribute to improve the production results, i.e.:

- optimised hot end and cold end coating procedure
- reduction of consumption for hot end coating material
- dry and wet scratch resistance during transport and filling
- brilliant performance of your hot end and cold end coated bottles



With best regards

  
Gabriel Chwalek

product · equipment · service

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We create the difference



technology made in germany



## Coating on glass

The surface coating is one of the most important components in order to meet with the high requirements of international standard for glass containers.

The coating systems, based on Tin-IV-Oxide and Polyethylene wax, have been refined to ensure optimum results in glass surface protection.

During the forming process of glass containers, micro scratches are generated on the glass surface. In the course of production and during packing, transport and filling, these micro scratches propagate and new imperfection is generated. The result is a substantial weakening of the overall glass structure, i.e. visual scratches up to glass breakage during production, transport and/or filling.

To minimize the defects in the glass surface, a coating is applied in two steps:

- the hot end coating, directly after the forming process
- the cold end coating, directly after the annealing process

*GlassChem HOT 99* forms the necessary Tin-IV-Oxide on the body of the glass containers.

Beside the advantage of surface protection directly after the forming process, the hot end coating gives an ideal basis, like an undercoat for lacquers, for the "finish performance", i.e. the cold end coating, of glass containers.

The polyethylene wax dispersion *GlassChem CC 25* offers a high resistance against any negative loading influences from outside.

*GlassChem LP 25* is excellently suited as coating agent whenever slight protection in dry conditions is desired.

Any variation of properties can be achieved by a freely adjustable mixture of the two products *GlassChem CC 25* and *GlassChem LP 25*.

After annealing, the diluted cold end coating products are applied by spraying the invisible Tin oxide layer of the glass surface. Depending on the result required, the application is carried out usually from above by *GlassChem CES* - or in special cases - by under belt application.

Scratch resistance is an extremely important parameter of coating quality for transport as well as for the filling process for all types of glass containers.

Only the synergy of *GlassChem* hot end and cold end coatings provides the high resistance that is required for the satisfactory of your customers: the fillers of your bottles and jars.

## Hot end coating

### *GlassChem HECSt*

In order to fully comply with the technical expectations in this field, *GlassChem HECSt* (Hot End Coating Station) has been developed. This equipment offers high efficiency, high operation reliability and all necessary control and alarm systems.

As our hood is completely made of stainless steel, it ensures important advantages regarding maintenance. Additionally, its construction grants very easy handling and thus involves only very little time expenditure.

Special features:

- Coating hood with exhaust and cooling system made of stainless steel
- Midsection made of stainless steel
- Control panel with alarm unit
- Connection cable to hood of 10m length
- Metering pump with float control

Options:

- Length of 1600 mm for production speed of more than 300 bottles per minute
- Spare parts
- Commissioning and training of staff
- Coating agent *GlassChem HOT 99*

### *GlassChem HOT 99*

Based on our own specification, the hot end coating product *GlassChem HOT 99* has been developed. The specific characteristics of the stabilized MBTCl are high purity, stability and environmental safety.

*GlassChem HOT 99* is vaporized at a temperature of >100°C and is circulated within a coating hood.



## Cold end coating

### *GlassChem CES* Cold End Coating Spraying Unit

*GlassChem CES* is a cold end spraying unit with several innovative features and thus its operation has well-proven in the meantime.

The most important characteristic of this unit is the simplified adjustment due to the central display programming. *GlassChem CES* is equipped with 2 spray guns which are joint to a lift system. This lift system is guided by a light barrier and ensures - subject to regular bottle lines - a spraying below the bottle finish.

The spray system is supplied completely wired and tubed. *GlassChem CES* is placed on the frame of annealing lehr where the surface of the glass containers reaches a temperature of min. 100°C and max. 150°C.

The automatic dosing system *GlassChem DOS* ensures the necessary mixture of the cold end coating product with water.

### *GlassChem CC 25 / GlassChem LP 25*

*GlassChem CC 25* as cold end coating product and *GlassChem HOT 99* as hot end coating product lead to high scratch resistance under dry and wet conditions of the glass surface. This combination has shown superior results compared to the market standards.

Typical applications are on glassware with strong loading, lightweight containers, tableware, jars, etc.

Water soluble coating and dry scratch resistance are achieved with *GlassChem LP 25* (Light Protect) – the optimum product for short term protection during internal transport and/or before decoration.

An innovation in the field of cold end coating is the mixability of both products in any required ratio. As a consequence, the special demands of the fillers to the glass products will be realised.

Please find a detailed description of the properties in the technical data sheets.

