



## *The astounding 3D Effect - „impressive“ glass design*

Besides shape it's mainly the colour that makes glass products more beautiful, decorative, and functional. 3D Effect is a water borne glass coating for individual solutions in challenging design.

Due to its magnetic properties 3D Effect Hydroglaslack shows a special feature: Bringing a permanent magnet or electromagnet close to the wet coat the pigments are orientated along the magnetic flux lines. This way one can produce astounding and unique three dimensional images with fascinating depth effect within seconds.

3D Effect Hydroglaslack is a water borne coating material. It has been designed for the decoration of glass surfaces without additional protective coating. Thus this one-pack coating is the right choice for objects that are not regularly cleaned in the dishwasher, such as decorative items, beverage bottles, or packagings for cosmetics.

For higher durabilities 3D Effect Hydroglaslack can easily be coated with our grade Hydroglasur making it suitable as a design element for tableware.





## PRODUCT VERSIONS AND COLOURS

3D Effect Hydroglaslack is available in the following product versions:

### **3D EFFECT HYDROGLASLACK GLE200**

brilliant through mat  
translucent to hiding

3D Effect Hydroglaslack GLE200 is available in an assortment of metallic basic colours that enables our customers to mix a wide range of colour shades.

All basic colours of GLE200 are mixable in any ratio. This allows on one hand the production of a variety of colour shades, on the other hand it permits finishes with smooth transitions from one colour to another.

## PROPERTIES

3D Effect Hydroglaslack GLE200 is a high-class organic water borne coating with outstanding properties:

- Good adhesion to glass
- Hard, viscoplastic surface with excellent mechanical characteristics
- The basic colours of our product line 3D Effect Hydroglaslack show preeminent light fastness (indoor).
- Good resistance against chemicals according to DIN ISO 2836, good solvent resistance, good resistance against alkalis and acids
- The coatings are free of heavy metals and other toxic substances.





## TECHNICAL REQUIREMENTS AND APPLICATION GUIDELINES

STORAGE AND SHELF LIFE:	3D Effect Hydroglaslack should be stored in original containers between +5°C to +30°C. Appropriate storing provided, shelf life is minimum three months.						
VISCOSITIES:	3D Effect Hydroglaslack is usually delivered ready-to-use; for further information please consult the technical information sheet.						
SUBSTRATE:	Like any other material glass is subject to environmental influences. Please check the objects to be coated for suitability beforehand and follow our recommendations for application and regular tests in the production.  Please clean objects prior to coating. The precondition for proper finishing results is a clean glass surface, i.e. free from fat, dust, finger prints, or slip agents (end coating).						
THINNING / CLEANING:	Demineralized (deionised, distilled, fully desalted) water						
NOZZLE SIZE:	manual spray gun: 0.8 to 1.5 mm or automatic application: 0.5 to 1.0 mm						
PRESSURE:	approx. 3 to 4 bar (atomisation)						
PAINT PRESSURE:	max. 1 bar, usually 0.6 bar						
RECOMMENDED FILM THICKNESS:	18 to 25 µm dry film						
During application the object as well as paint and spraying equipment must have a temperature of min. 15°C. It is possible to varnish pre-heated pieces – for proper flow the pieces should not be heated above 40°C though. Warm surfaces speed up evaporation and thus result in thicker layers.							
FORMATION OF THE EFFECT:	To form the 3D effect the wet coat is brought close to a permanent magnet or electromagnet during 1 to 3 seconds. Depending on the strength of the magnetic field the produced image will be more or less sharp-edged.						
CURING CONDITIONS:	3D Effect Hydroglaslack cures in a temperature range of 150 to 190°C, e.g. <table style="margin-left: 40px;"> <tr> <td style="padding-right: 10px;">30 Min.</td> <td style="border-left: 1px solid black; padding-left: 5px;">at 150°C object temperature</td> </tr> <tr> <td>15 Min.</td> <td style="border-left: 1px solid black; padding-left: 5px;">at 170°C object temperature</td> </tr> <tr> <td>8 Min.</td> <td style="border-left: 1px solid black; padding-left: 5px;">at 190°C object temperature</td> </tr> </table> <p>A pre-drying at 30 to 80°C for 8 to 10 Min. is recommended to prevent the formation of blisters. No post curing at room temperature. In case of insufficient cross-linking, proper curing can only be accomplished by reheating to temperatures above 160°C.</p>	30 Min.	at 150°C object temperature	15 Min.	at 170°C object temperature	8 Min.	at 190°C object temperature
30 Min.	at 150°C object temperature						
15 Min.	at 170°C object temperature						
8 Min.	at 190°C object temperature						
Please consider that the heat-up time may vary significantly depending on wall thickness. We recommend checking the degree of curing by the following test: the coating may not soften after 16 to 24 hours storage in cold water. If softening occurs, the curing is not completed and additional baking is required.							
SAFETY INFORMATION:	3D Effect Hydroglaslack is not a dangerous material with respect to the German chemical regulations as well as the corresponding EU rules. This product, therefore, does not require any special labelling. It is not classified dangerous transport material.  Please consult the safety data sheet for 3D Effect Hydroglaslack. It contains information for the handling, product safety and the industrial hygiene of this product.						



## 3D EFFECT HYDROGLASLACK

## EFFECT COATINGS

### DESIGN EXAMPLES:

These are only a few examples of the multitude of application and design options with 3D Effect:



Note! The information submitted in this publication is based on our current knowledge and experience. The provided information does not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislations are observed.