

**Aqueous two-pack PU clear coat,
based on Bayhydrol A 145 and Bayhydur 304**

| | Raw Material | Supplier | A clearcoat % by wt. | B clearcoat % by wt. |
|----------------|---|----------|----------------------------|----------------------------|
| Comp. 1 | 1. Bayhydrol A 145, 46% | (1) | 48.35 | 48.35 |
| | 2. Surfynol 104 BC | (2) | 1.10 | 1.10 |
| | 3. Borchi® Gel PW 25 | (3) | 0.15 | — |
| | 4. Borchi® Gel 0621 | (3) | — | 0.12 |
| | 5. Borchi® Gol LA 200 / Borchi® Gol LA 50 (3/7), 10% in butyl glycol | (3) | 1.00 | 1.00 |
| | <i>Total</i> | | <i>50.60</i> | <i>50.60</i> |
| Comp. 2 | 6. Bayhydur 304 | (1) | 15.10 | 15.10 |
| | 7. Dipropylene glycol DME | (4) | 3.80 | 3.80 |
| | <i>Total</i> | | <i>18.90</i> | <i>18.90</i> |
| | 8. Water (for thinning) | | 30.50 | 30.53 |
| | <i>Total</i> | | <i>100.00</i> | <i>100.00</i> |

Indications**Formulation of clearcoat, comp. 1:**

Place const. 1. in a dissolver. Add in const. 2.-4. under stirring (10 min at 2000 rpm). Leave to deaerate for one day.

Application

Compressed-air spraying, nozzle 1.3 mm
1 cross spraying, 5 min intermediate deaeration
1 cross spraying, 10 min final deaeration

Remarks

Light stabilizer to improve weather stability (add before component 2)
Clearcoat: 1% Tinuvin 292 (solid / solid resin)
2% Tinuvin 1130 (solid / solid resin)

Data

| | A and B clearcoat |
|---|----------------------|
| NCO :OH - ratio | 1.5 |
| Ratio comp. 1:2 | 2.7 : 1 |
| Flow time, DIN 53211-cup 4 mm, at 23 °C | 25 s |
| Cosolvent | 9.2 % |
| Density | 1.0 kg/l |
| VOC | 194 g/l |
| pH-value | 7.7 |
| Solids content on application | 38 % |

| Technical properties | A and B clearcoat | |
|---|--|----------|
| | Viscosity increase: comp. (1 +2) DIN 4 (s) / pH-value | 0 h |
| | 3 h | 34 / 7.2 |
| Drying 30 min 60 °C | (0-5)* | 2 |
| T1 / T3 (DIN 53150) | h | 1 / > 7 |
| Pendulum hardness (s) DIN EN ISO 1522 (Substrate: glass) | 1d RT | 123 |
| | 7d RT | 174 |
| | 16h 50°C | 169 |
| Film thickness | µm | 50 |
| Gloss 20° angle / visually (DIN 67530 / ISO 2813) | | 84 / 1 |
| Haze (DIN 67530 / ISO 2813) | | 24 |

* Evaluation: 0 = no visible changes
5 = test surface was strongly changed respectively destroyed

Chemical resistance:

Paint system on car body panel + conv. two-pack-PU primer (+ conv. basecoat for Formulation A and B)

| | | A and B clearcoat |
|--------------------------------------|--------------|----------------------|
| H ₂ O (1h) | immediatelly | 4 |
| | 1d RT | 2 |
| | 7d RT | 1 |
| | 16h 50°C | 1 |
| 5' premium gas / MPA / Xylene | immediatelly | 4 3 4 |
| | 1d RT | 2 3 3 |
| | 7d RT | 1 1 1 |
| | 16h 50°C | 1 1 1 |
| Alkaline/acid** cleaning agent (1 h) | 7d RT | 0 / 0 |

* Evaluation: 0 = no visible changes
5 = test surface was strongly changed respectively destroyed

** Alkaline = 2% sodium hydroxide solution
Acid = 2% sulfuric acid

Suppliers

- (1) Covestro (www.covestro.com)
- (2) Air Products (www.airproducts.com)
- (3) Borchers (www.borchers.com)
- (4) Clariant (www.clariant.com)

Updated: 25.01.2016

Borchers GmbH

Berghausener Str. 100 / 40764 Langenfeld / Telephone: +49 (0) 2173 – 39 26 666
Fax: +49 (0) 2173 – 39 26 999 / Internet: www.borchers.com / E-Mail: info.info@borchers.com

Our product information is given in good faith but without warranty. This also applies where proprietary rights of third parties are involved. This information does not release the customer from the obligation to test our products as to their suitability for the intended processes and uses. The application, use and

processing of our products and the products manufactured by the customer on the basis of our technical advice are beyond our control and, therefore, entirely the customer's own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.