

Aqueous white glossy two-pack PU topcoat, with high chemical resistance, based on Bayhydrol A XP 2695 and Bayhydur 304 / XP 2759

	Raw Material	Supplier	% by wt.
Comp. 1	1. Bayhydrol A XP 2695, 41% in water / butoxy	(1)	44.63
	2. Dimethylethanolamin, 10% in water	(2)	2.40
	3. Surfynol 104 BC, 50% in butyl glycol	(3)	0.58
	4. Borch <sup>i</sup> ® Gel 0621	(4)	0.15
	5. Borch <sup>i</sup> ® Gol LA 200, 10% in butyl glycol	(4)	0.74
	6. Borch <sup>i</sup> ® Gen 0851	(4)	0.95
	7. Sachtleben R-KB-4	(5)	23.44
	8. Water		1.18
	<i>Total</i>		<i>74.07</i>
Comp. 2	9. Bayhydur 304, 100%	(1)	4.61
	10. Bayhydur XP 2759, 70% in methoxy propyl acetate	(1)	18.46
	11. Methoxy propyl acetate		2.86
	<i>Total</i>		<i>100.00</i>

Production indications

*Formulation Topcoat Comp. 1*  
Place const. 1. in a vessel. Stir in successively const. 2.-6. (5 min at 2000 rpm).  
Add gradually const. 7. under stirring at approx. 2000 rpm.  
Then pre-disperse for 10 min at approx. 2000 rpm and further disperse for 60 min in the mill base ( $T \leq 30^{\circ}\text{C}$ ) until reaching particle size  $\leq 10\mu\text{m}$ .  
Add gradually const. 8. under stirring. Afterwards filtrate.  
Leave to deaerate for one day.

*Formulation Hardner Comp. 2*  
Mix Bayhydur 304 and Bayhydur VPLS 2759 in ratio 1:4. Add methoxy propyl acetate and homogenize.

Mix Comp. 1 and Comp. 2 and homogenize, then add approx. 25% water for adjusting the spray viscosity.

Application                      Spraying using HVLP-pneumatic flow cup spray gun  
(nozzle 1.4mm / air pressure: approx. 1.9 bar)

Technical data

NCO : OH - ratio	1.5:1
Mixing ratio (comp. 1 : comp. 2)	10 : 4
Pigment : Binder - ratio	0.7:1
Spray viscosity, DIN 53211-cup 4 mm, at 23 °C	approx. 20 s
VOC (calculated acc. Directive 1999/13/EC)	approx. 186 g/l
Solid content on application	approx. 50 %
Drying time (DIN 53150; TG 1 / TG 3)	0,5 h / 1 h
Gloss 20° / 60° / Haze (DIN EN ISO 2813)	82 / 90 / 19
Film Hardness(pendulum hardness tester-König; DIN EN ISO 1522)	after 1 d / 23 °C after 14 d / 23 °C
	130 s 175 s

Suppliers

- (1) Covestro ([www.covestro.com](http://www.covestro.com))
- (2) Sigma-Aldrich ([www.sigmaaldrich.de](http://www.sigmaaldrich.de))
- (3) BASF ([www.basf.com](http://www.basf.com))
- (4) Milliken ([www.milliken.com](http://www.milliken.com))
- (5) Venator ([www.venatorcorp.com](http://www.venatorcorp.com))

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