

## Starting point formulation – Acidic bathroom cleaner with pH of 2.5 utilized OPTIGEL-WX

Sprayable, rinse off bathroom cleaner utilizing OPTIGEL-WX for excellent surface cling. By allowing the cleaner to stay on the surface longer, a weaker (safer) acid can be used

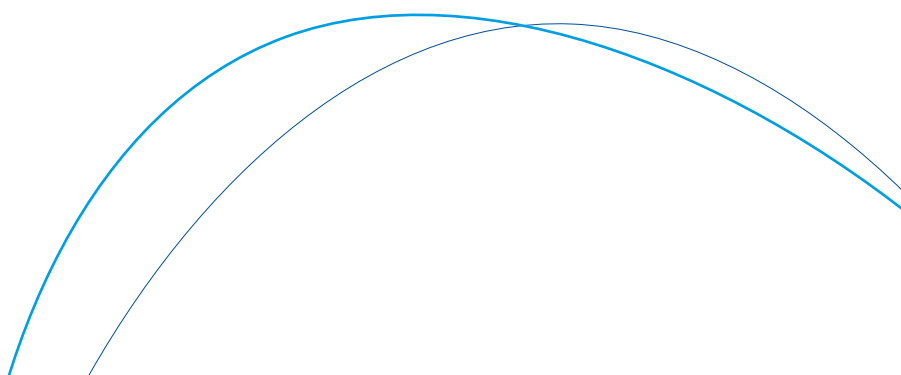
### Formulation

Position	Component	Supplier	Function	Weight (g)
1	Demineralized water		Solvent	32.70
2	OPTIGEL-WX (100%)	BYK	Rheology additive	1.40
3	Demineralized water		Solvent	60.40
4	Citric acid monohydrate		Acid	4.00
5	Berol 648 NG <sup>1)</sup>	Julius Hoesch	Cationic surfactant	1.50
<b>Total</b>				<b>100.00</b>

### Instructions

- Mix the initial portion of water with the OPTIGEL-WX and stir for 20 min at 2,000–2,500 rpm. The dispersion should be homogenous at this point.
- Premix water and citric acid monohydrate and stir 5 min at 1,800–2,200 rpm.
- Slowly incorporate the citric acid solution while stirring and continue for 10 more min at 2,700–2,900 rpm.
- Finally, add the surfactant and stir for 5 min at 1,400–1,600 rpm.

<sup>1)</sup> Berol 648 NG is a quaternary C12-C14 alkyl methylamine ethoxylate methyl chloride



## Characteristic data /specification

Data	Unit	Value
pH value		2.50
Viscosity byko-visc advanced EX L Spindle L 3 at 10 rpm	mPa-s	1,200–1,400
Viscosity byko-visc advanced EX L Spindle L 3 at 100 rpm	mPa-s	200–250
Rheological additive solids	%	1.40
Solids	%	5.40

### Further information / application

- The formulation is designed to be used as it is.
- Spray the acid cleaner undiluted on bathroom surfaces, then rinse with water after 5 min.

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This issue replaces all previous versions.

