

## Starting Formulation, CL-9030

Jul 15<sup>th</sup> 2021  
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### End-Use Homecare

Highly acidic toilet-cleaner with pH of 0.5

Utilized RHEOBYK-7420 ES

Sprayable, rinse off bathroom cleaner utilizing RHEOBYK-7420 ES to provide surface cling for a strong acid solution

### Formulation

Pos.	Component	Supplier	Function	Weight [g]
1	Demineralized water		Solvent	80.0
2	Amido sulfonic acid		Acid	7.0
3	<b>RHEOBYK-7420 ES (40%)</b>	<b>BYK</b>	<b>Rheology additive</b>	<b>3.0</b>
4	Berol 260**	Julius Hoesch	non-ionic surfactant	2.5
5	methane sulfonic acid (70%)		Acid	4.0
6	phosphoric acid (75%)		Acid	1.5
7	Na-Cumolsulfonate		surfactant	2.0
				100.0

\*\* Berol 260 is a narrow distribution range nonyl-undecanol (C9-C11) 4 EO 100%

### Instructions

Mix water with the amino sulfonic acid and stir for 10 minutes at 2500 rpm with 30mm tooth blade ( 4 m/s ) until the dispersion is dissolved.

Add the RHEOBYK-7420 ES and stir 5 minutes at 2200 rpm ( 3.5 m/s ).

Incorporate the nonionic surfactant while stirring at 2200 rpm ( 3.5 m/s ).

Slowly add the acids into the batch under stirring and continue for 10 minutes at 2200 rpm ( 3.5 m/s ).

Finally, add the Na-Cumolsulfonate and stir for 5 minutes at 1600 rpm ( 2.5 m/s ).

## Characteristic Data/ Specification

Data	Unit	Value
pH value		0.5
Viscosity byko-visc Advanced EX L Spindle L 3 at 10 rpm	mPa-s	1900-2000
Viscosity byko-visc Advanced EX L Spindle L 3 at 10 rpm	mPa-s	500-550
Rheological additive solids	%	1.2
Solids	%	16.6%

## Further information / Application

The formulation is designed to be used as is.

Spray the acid cleaner undiluted on bathroom surfaces, then rinse with water after 5 minutes.

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This issue replaces all previous versions.